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OIL AND GAS JOURNAL

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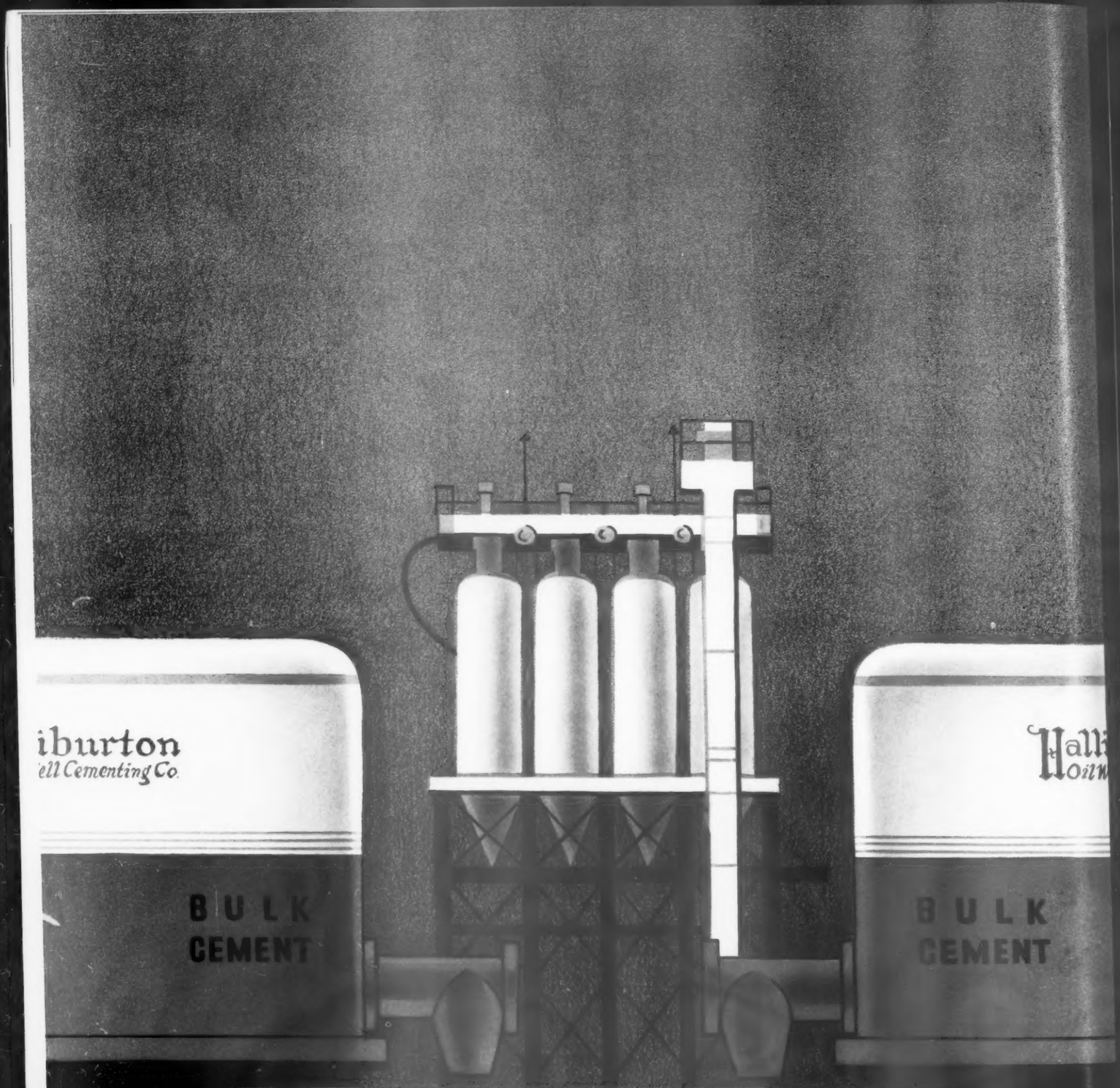

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HOME OFFICE, 211 S. CHEYENNE, TULSA
PHONE 3-6291

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SUBSCRIPTIONS: United States, 1 year, $6.00; 6 months, $3.00. Elsewhere, 1 year, $7.00; 6 months, $3.50. SINGLE COPIES: 20 cents each. Back copies, when over a year old, 50 cents. CHANGES OF ADDRESS reaching the Tulsa office of the Journal by Saturday take effect with the following issue.

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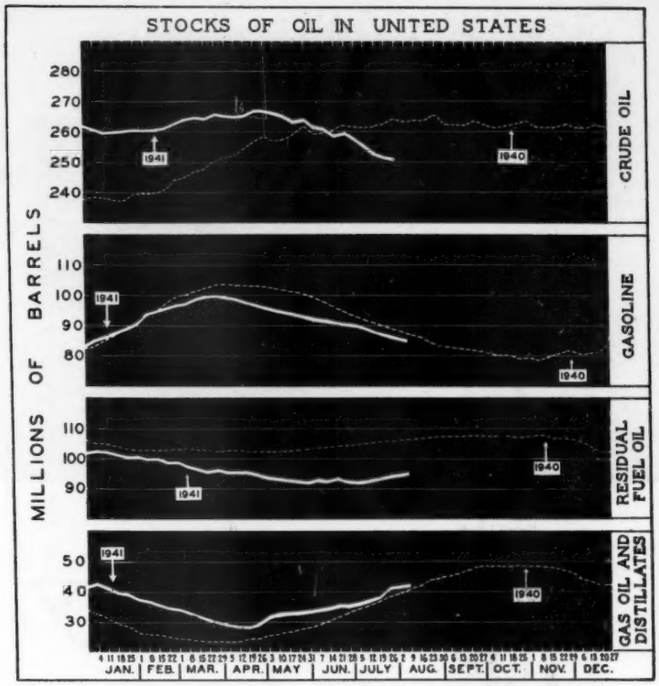
Trends

Defense Pipe-Line Needs, Element In Material Shortage



THE past week has brought additional evidence of what the requisitioning of coastwise tankers for British service may mean to oil operations within this country. With the official announcement at Washington that plans for the construction of the national pipe line have been approved, it was also learned that the petroleum coordinator's office has served notice on representatives of the petroleum industry that normal steel and other supplies for operations will not be available for an indefinite period. It was pointed out several weeks ago when the emergency pipe line was first projected to offset the loss in tankers that the Government probably would contend that the metals required for the new line should be deducted from the usual steel purchases of the industry.

It is estimated that the new line extending from East Texas and North Louisiana to Atlantic seaboard refineries via Illinois points, will require at least 400,000 tons of steel. This is equivalent to the casing required for approximately 13,000 new wells drilled to an average depth of 3,200 ft. The pipe-line tonnage includes only the main lines and does not take into consideration the connecting lines to be built in order that the trunk system will have sufficient crude oil for a 250,000-bbl.-daily operation. The defense pipe line will be given a top priority rating which will assure that any materials needed in its construction over the next 10 months will be shipped promptly. The same situation will apply to other defense projects within the petroleum industry including the expansion of capacity at refineries for the production of 100-octane gasoline. It was understood several months ago that the construction programs under way or completed at refineries would take care of this country's and the British consumption of 100-octane gasoline. These requirements have been adjusted upward recently, and the needs of the U.S.S.R. have been added to the United States-British totals.

Operators will strongly oppose a substantial reduction in the materials and equipment required to maintain normal operations which, it is pointed out, are the backbone of the industry's ability to furnish the emergency requirements. There have been numerous complaints that oil operators have been unable to secure steel and other supplies needed to maintain present drilling, production, refining and transportation operations. Plans are under way to bring this situation to the attention of the petroleum coordinator's office which under the action taken last week will make recommendations to OPM covering all supplies for the petroleum industry. Operators are hopeful that the change in procedure will expedite deliveries.

CRUDE PRODUCTION *3,899,240 bbl. daily average—up 208,370 bbl. One year ago 3,492,081 bbl.*

CRUDE STOCKS *252,535,000 bbl. as of August 2—down 193,000 bbl. One year ago 264,297,000 bbl.*

GASOLINE STOCKS **86,022,000 bbl. as of August 9—down 757,000 bbl. One year ago 87,681,000 bbl.*

RESIDUAL FUEL-OIL STOCKS *95,412,000 bbl. as of August 9—up 612,000 bbl. One year ago 106,487,000 bbl.*

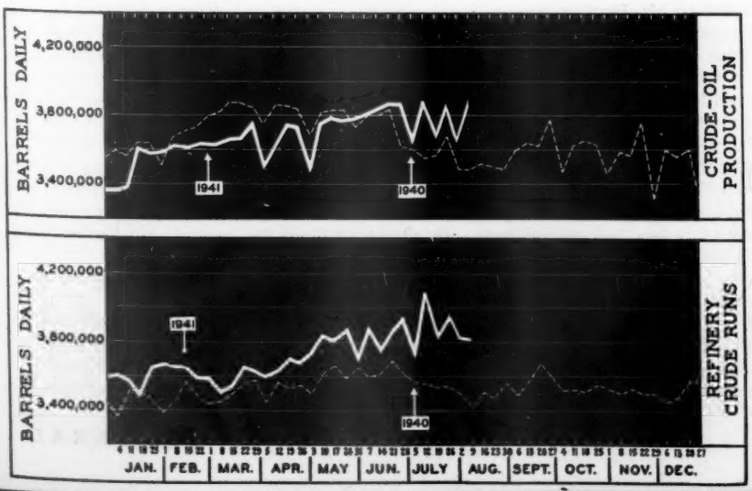
GAS OIL AND DISTILLATES *42,136,000 bbl. as of August 9—up 703,000 bbl. One year ago 40,865,000 bbl.*

REFINERY RUNS *3,835,000 bbl. daily week ended August 9—down 10,000 bbl. One year ago 3,435,000 bbl.*

*Includes 7,772,000 bbl. aviation motor fuel, up 99,000 bbl. One year ago 5,546,000 bbl.

DAILY AVERAGE PRODUCTION FOR WEEK

	Aug. 9, 1941	Bur. Mines Aug. est. of demand	August state allowables	Aug. 2, 1941
Arkansas	73,580	80,700	74,428	73,300
California	650,450	641,000	610,000	638,500
Eastern fields	112,000	121,000	.....	112,300
Illinois	350,845	390,100	.....	350,195
Kansas	225,250	240,800	242,800	235,500
Louisiana	322,315	324,500	324,500	318,905
North Louisiana	*79,315*	.....	.....	*78,555*
Louisiana Gulf Coast	*243,000*	.....	.....	*240,350*
Michigan	41,900	36,000	.....	42,470
Mississippi	47,825	25,200	.....	47,740
Nebraska	5,100	4,400	.....	5,200
New Mexico	109,500	112,900	112,900	109,370
Oklahoma	413 475	492,400	415,000	417,250
Rocky Mountain states	107,500	109,400	.....	107,640
Texas	1,439,500	1,361,600	1,412,121	1,232,500
East Texas	*369,950*	.....	.....	*298,550*
West Texas	*272,650*	.....	.....	*221,650*
North Central Texas	*130,850*	.....	.....	*129,550*
East Central Texas	*83,200*	.....	.....	*79,400*
Texas Panhandle	*80,250*	.....	.....	*80,750*
Texas Gulf Coast	*406,900*	.....	.....	*341,150*
Southwest Texas	*95,700*	.....	.....	*81,450*
Total United States	3,899,240	3,940,000	.....	3,690,870
Total production Jan. 1-Aug. 9, 1941		812,848,225 bbl.		
Same period last year		827,609,418 bbl.		



Uncertainty Still Clouds the Industry's Priority Position

By HENRY D. RALPH

WASHINGTON, D. C., Aug. 12.—Complete priority control of all steel assumed this week by OPM added to the confusion that surrounds the procurement of supplies essential to operations in the oil industry. The new obstacle was only partially offset by the step taken to simplify the industry's priority problems by arrangements to direct all future applications for material through the office of Petroleum Coordinator Ickes.

The oil industry has been deleted from the original list of 26 essential industries that were scheduled to receive a blanket priority rating for materials needed for maintenance and repair. Furthermore, the industry received an ominous warning from Deputy Coordinator Ralph K. Davies, speaking before the district and functional committee chairmen assembled in Washington August 11.

It is perfectly apparent as of this date, Mr. Davies declared, that supplies of steel and other materials will not be adequate to satisfy the regular requirements of the petroleum industry and that the "idea of business as usual applied to the oil industry, therefore, was out."

Until recently, the oil industry has been enabled to receive partial satisfaction on its steel requirements by projecting needs several months forward. Now, however, with all forms of steel under priority control, the only supplies available to industries without a preference rating will be the surplus capacity remaining after other earmarked requirements are satisfied.

Under the new arrangement, any firm in any branch of the oil industry needing priority assistance in obtaining materials or supplies should make application to the office of the petroleum coordinator. As soon as possible there will be a priorities specialist in each of the five district offices of the coordinator's organization who will make a preliminary examination of the applications and forward them to Washington. In Washington the applications are passed on by the production, refining, transportation, or marketing division of the coordinator's office, whichever is appropriate, and are then turned over to the priorities division of OPM or the civilian-supply section of OPACS. Just how OPACS fits into the picture is none too clear, since it is OPM which has the final say in granting priorities and in assigning preference-rating numbers. OPM and OPACS have been scrapping for weeks over the division of their jurisdictions and it may be some time yet before there is a clear delineation, but for the present OPM has the power.

The new arrangement is already in operation, though its details have not been ironed out, and for more than a week the coordinator's office has been handling priority requests of the oil industry, both for new construction and for maintenance and repair. Both OPM and OPACS have representatives assigned to the coordinator's office, and they have offices in the Interior Department Building along with the coordinator's staff. The OPACS man is J. H. Ellender, and the OPM man is James E. Hughes, an independent Texas oil producer who has been in the priorities division since March.

How the Arrangement Works

Roughly, the arrangement works like this: When an oil company needs something subject to priorities (which includes about everything except local building supplies) it makes an application to the petroleum coordinator, giving full details. The appropriate division then passes on the need for the material, its relation to national defense, and its relative urgency in comparison with other requests of the same nature. A recommendation is then forwarded to Mr. Hughes, who correlates the recommendations of the four divisions and assigns a tentative preference-rating number. The priority form is then sent to the appropriate section of OPM priorities division (steel, copper, machine tools, etc.) which decides whether the recommended preference rating is appropriate in view of the many other demands for the same material for other defense and civilian requirements. OPM finally assigns a preference rating and issues the priority order. The oil company then must shop around and find a supplier who can promise delivery and who is not already booked to capacity for months ahead with orders bearing higher preference ratings. Often the OPM commodity experts can assist in locating a supplier, particularly where the material involved is under inventory control.

When the authority of OPACS is better clarified, that organization may also have a hand in the process, but there are indications that Coordinator Ickes may be able to obtain complete control over the allocation of civilian supplies to the oil industry. More than a month ago OPACS announced that OPM had agreed to let it handle material for maintenance and repair for 26 important industries, including the oil industry. When this order was issued it did not name the oil industry and the original list of 26 had been reduced to nine.

The nine industries included in the original listing of those receiving an A-10 rating is to be supplemented soon with nine more but the oil business is not included in either group.

An additional order is now being drafted by OPM giving the petroleum coordinator authority over oil-industry maintenance and repair priorities along with new equipment.

There are shortages of practically all metals and many other commodities, which means rationing all around and complaints from everybody. Even the Army and Navy are complaining that they cannot get high-enough priority ratings. And even a high priority rating does not assure prompt delivery if there is no material in stock or if there are previous orders on file with an equal rating.

The priorities system is complicated because of the fact that there are so many different types of priority controls and priority instruments. At the top is the Priorities Critical List issued by the joint Army and Navy Munitions Board and containing some 300 items, mostly completed military equipment but including a number of raw materials and items used in industry such as pumps and instruments. When an item is on this list the board decides its priority rating and issues an "extendable" priority rating which enables the contractor to use the priority order in obtaining whatever he needs to fill the contract on schedule.

Other materials needed for defense are controlled by the priorities division of OPM in a variety of ways, and there is some duplication of authority between OPM and the board. On 15 commodities OPM has imposed industry-wide control, which theoretically means that the Govern-

Ickes' office made clearing point for all oil-country priorities. Still much remains to be done to clear up the confusion that prevails throughout the industry. Both OPM and OPACS have representatives assigned to the coordinator's office. This article describes functioning of the new system

ment has commandeered the entire industry and allots its output as it sees fit, ordering producers to supply certain quantities to designated users. On 14 other materials OPM has imposed inventory control, a milder form of allocation. Still a different and special type of control is exercised over steel.

Then there are blanket ratings and project ratings. Blanket ratings have been issued to producers of freight cars and military aircraft, which permit them to obtain high preference ratings for all their supplies without further individual action by OPM. If the oil industry could obtain a blanket rating as a defense industry most of its priority problems would disappear, but there appears to be little chance of this.

Project ratings are issued to the oil industry, but only for the construction of a facility urgently needed for national defense, such as an aviation gasoline or toluene plant, or a pipe line in a strategic location. Coordinator Ickes last week obtained an A-1-a project rating for the Portland-Montreal pipe line, the highest rating in the system except AA which is reserved for special exigencies. This means that the Portland-Montreal line can extend its A-1-a rating to any of its contractors and to their suppliers and these orders must be filled ahead of all others with lower ratings, regardless of the date received. Until recently OPM customarily gave A-1-c project ratings to 100-octane plants, but during the past week it is understood that Coordinator Ickes has obtained A-1-a and perhaps even an AA rating for this purpose.

Supplies Rating Plan

Still another type of priority control is the defense supplies rating plan, sometimes called "off the shelf" priorities. An A-10 rating is given to manufacturers of stock items, such as electric motors, which go into both defense and non-defense uses and which must be manufactured and kept in stock before orders are received. Such a manufacturer can extend this rating to suppliers to obtain raw materials but only for the percentage of his material equal to the percentage of his finished articles currently going into defense contracts. This supplies-rating plan is of no use to the oil industry except in obtaining standard items for use in an Army or Navy contract.

Cutting across all these broad categories of priority control are individual certificates, known as Form PD-1. This is what the oil industry is using for everything not covered by the limited number of special project ratings. These individual certificates can be obtained by anyone needing materials if his work is important to defense, whether or not his production is going directly into defense. Literally thousands of PD-1 applications come into OPM every day, from every type of industry, and somebody in the appropriate commodity section assigns whatever preference rating he thinks is justified by the information disclosed in the application, which may be A-1-f, or A-6, or B-4, or some other rating. Until last week, most of the commodity sections of the priorities division referred such applications to the petroleum unit of the production division for advice, but now they are all clearing through the coordinator's office.

Rapid Personnel Changes

One complaint of the priorities system has been that OPM personnel changes so rapidly that a different set of people handle similar priority applications every few days, so that there has been no uniformity in decisions. Frequently a personal visit to the man handling a PD-1, when he could be located, permitted an explanation of the character of the need which resulted in a satisfactory priority rating, though in many cases this could have been obviated by a full explanation on the application. As these applications now clear through the coordinator's office it is presumed that they will be handled in the first instance by men who understand the technical terms and processes used in the oil industry so that a proper evaluation can be made of all such requests and individual applications can be weighted with respect to others on file and to the most important defense demands on the industry.

After a PD-1 leaves the coordinator's office, however, it still must go through the OPM mill, and there are many complaints that weeks sometimes elapse after a PD-1 has been approved for a certain preference rating until the actual priority order is in the hands of the applicant.

There is also some confusion as to who should apply for a priority order, the user or the manufacturer. Frequently an oil company has obtained a priority order for a piece of equipment, such as a draw works, only to find that the order was not "extendable" to the equipment manufacturer, and the manufacturer then had to go through the same process to get a priority order to obtain materials for that job. On the other hand, there have been cases where an oil company simply placed an order with a manufacturer and the manufacturer obtained the necessary priorities to get raw materials, but before the equipment was delivered the manufacturer received a government contract for the same equipment which carried a high priority rating requiring him to turn it over to fill the government contract. This could happen only in the case of equipment usable outside the oil industry, such as pumps. To guard against such an occurrence the oil company should have a priority order for the equipment even though the manufacturer must also get a priority for his supplies.

To get a priority order for production equipment it is usually necessary to obtain a certificate from the state conservation authority stating that the proposed well is essential, but details of the operation of this plan have not yet been worked out. Some time ago OPM suggested that the oil industry use 20 per cent less steel in its production end, but no such arbitrary curtailment has been enforced as yet. Where production equipment is needed to keep an old well in condition the priority application is handled directly by the production division of the coordinator's office. As the new arrangement gets shaken down into an orderly system, and as steel becomes scarcer there may be a closer coordination between state conservation agencies and the petroleum coordinator in the allocation of steel for oil production. The present disposition of the coordinator's staff is to insist upon sufficient supplies to permit continued exploration and new production, although with the greatest possible economy of materials.

Accuracy Prime Essential

The best advice now—and for the future—is that all applications for priorities be filled out carefully, completely, and truthfully, giving full and detailed information as to why the requested materials are essential to defense or for continuance of the business. Much delay and misunderstanding has been caused by carelessness in filling out the forms and by failure to make a full explanation which can be understood by a person not acquainted with the technical terms of the oil industry. The story is told of a pump expert in OPM who gave a low rating to an application for pumps to be used in equipment for making alkylates because he had never heard of alkylates and they did not sound very important to him; when he learned that the pumps were essential to a 100-octane plant he gave the application the necessary high-preference rating.

This Week...

Business as usual for the oil industry is out, Deputy Coordinator Ralph K. Davies told chairmen of the district and functional committees Monday when they assembled in Washington, D. C.

●

Present petroleum conditions were cited by Coordinator Ickes as the best possible example of government and industry cooperation.

●

Full priority control of steel, ordered August 10 by OPM, casts a more inscrutable haze than ever over the oil industry's chances of procuring supplies essential to its operations.

●

The oil industry expects little from designation of the coordinator's office as clearing point for equipment priorities. Approval by Secretary Ickes simply speeds OPM consideration of the request for materials. All other red tape remains intact.

●

Depleted inventories of Pennsylvania lubricating oils and dwindling well completions resulted in rising prices and finally in the ceiling ordered by OPACS.

●

Gulf Coast refiners are continuing their efforts to remove the top price of 6 cents per gallon on 80-octane (Research method) gasoline. No relief yet is in sight. Meanwhile, refiners mark time.

●

Night closing of service stations and the coordinator's pleas for voluntary curtailment of gasoline consumption have proven ineffectual. East Coast gasoline sales for the latest week reported increased 1 per cent.

●

Washington writers who followed Dr. R. E. Wilson's fruitless efforts to obtain definite commitments on armed service requirements for aviation gasoline have taken sharp issue with Coordinator Ickes over his assertion that previous appraisals were too conservative. Last May Dr. Wilson asked for a 30 per cent increase in manufacturing capacity. The coordinator wants a 50 per cent expansion. Capacity to produce 14,000 bbl. per day is now under construction or definitely planned. Operating capacity now is 40,000 bbl. daily.

●

Current best guess is that compulsory gasoline rationing will start in the East Coast area September 15. Monthly passenger-car fuel allotments will be less than 15 and more than 5 gal., the extremes of rumors so far.

●

Citation of specific problems obstructing the gift of 1 day's production from Texas fields to Britain has not deterred the Railroad Commission. August 17 remains designated as "Texas-Oil-for-Britain" day.

●

First shipments of aviation gasoline in four United States tankers have cleared from the Pacific Coast bound for Vladivostok, U.S.S.R. Tankers assigned to Soviet service by Coordinator Ickes make California's contribution of marine equipment to lend-lease aid total 150,000 tons.

●

Coordinator Ickes urged oil committee chairmen to take the initiative in insuring adequate supplies of petroleum for all foreseeable requirements. This, the industry contends, it has long since accomplished. Materials to maintain this position inviolate are now in government hands.

●

Sucker-rod manufacturers and consumers met in Dallas, Tex., early this week to formulate a definite plan of appeal for priority rating that will permit continued operation of plants and pumping wells. Incessant calls on OPM precipitated the meeting.

●

The 1,820-mile national-defense crude line, final plans for which were submitted to the coordinator August 11, will require about 400,000 tons of steel. The same tonnage would equip nearly 13,000 producing oil wells.

New pusher-type towboat, Anker L. Christy, of Pure Oil Steamship Co. fleet on Lake Michigan heading for the Chicago River on preservice run from boatbuilder's yard in Sturgeon Bay, Wis. Triple-screw, 1,200-hp. electrically controlled vessel was inspected by company officials in Chicago before entering river service. In photo, retractable pilot house is being lowered to permit passage under Chicago River outerbridge

Priority Rating Sought for Sucker-Rod Manufacture

DALLAS, Tex., Aug. 12.—Concerted effort to secure a priority rating for metals needed in the manufacture of sucker rods is taking form here this week at a meeting of oil producers and suppliers. The conference was called at the instigation of H. LeRoy Whitney, Alloy Steel Division, Iron and Steel Section of OPM, Washington, D. C.

Manufacturers and users of sucker rods meeting here Monday and Tuesday classified the different metals and alloys that go into this particular type of producing equipment. Tables were prepared on the estimated supply of material on hand and estimated demand for sucker rods in the industry for the coming year. Armed with the factual data compiled and coordinated at the meeting here, manufacturers and consumers of sucker rods will attempt to obtain priority ratings on the various metals and alloys in the order of their importance in the production of rods.

Carl A. Young, of Dallas, secretary of the A.P.I. Production Division, handled arrangements for the meeting, acting on directions from Mr. Whitney.

The meeting was requested by the OPM officials in an effort to clear the confusion growing from receipt at the Wasnington priority office of many requests for material for sucker-rod manufacture.

"In the past," Mr. Whitney wrote the A.P.I., "most of the sucker-rod manufacturers have specified a steel containing a considerable percentage of nickel and as the requirements for nickel for direct defense are so great, the situation as to an adequate supply of nickel is very critical.

"Accordingly, it is our request that the A.P.I. form a committee composed of producers to meet with a committee of sucker-rod manufacturers and makers of steel for sucker rods at an early date with a view to having a few men from each of the above-mentioned groups meet here in Washington with Dr. Waterhouse and me to see if some decision as to specifications cannot be arrived at."

Oil companies invited to send representatives to the Dallas meeting included Atlantic Refining Co., Barnsdall Oil Co., Carter Oil Co., Cities Service Oil Co., General Petroleum Corp. of California, Gulf Oil Corp., Humble Oil & Refining Co., Magnolia Petroleum Co., Phillips Petroleum Co., Pure Oil Co., Shell Oil Co., Inc., Sinclair Prairie Oil Co., Skelly Oil Co., Standard Oil Co. of California, Standard Oil Co. (New Jersey), Stanolind Oil & Gas Co., Sun Oil Co., Texas Co. and Union Oil Co. of California.

Manufacturers represented were: Axelson Manufacturing Co., Bethlehem Steel Co., Buffalo Bolt Co., Emsco Derrick & Equipment Co., Marion Machine & Foundry Co., National Supply Co., W. C. Norris Manufacturer, Inc., S. M. Jones Co., Standard Steel Spring Co., Texas Steel Co., and Oil Well Supply Co.

Pennsylvania Refiners Forced To Prorate Lubricating Oils

By A. C. MacINTYRE

OPACS' imposition of a price ceiling on Pennsylvania lubricating oils, pegging 200 viscosity neutral, 25 pour, at 33 cents per gallon and other grades in their respective normal relation, apparently ends the upward movement of quotations until basic conditions change.

The rapid expansion of industrial activity has been the most important factor in the sharp advance in domestic demand for Pennsylvania lubricants, although consumption by automobiles also has risen.

OIL CITY, Pa., Aug. 12.—Business is booming in lubricating oils and the Pennsylvania Grade region is enjoying the best demand in some time. Region neutrals are in such demand and inventories so low that refiners have been parceling out their supplies to regular customers.

The tanker deficiency has increased the demand for region lubes, since this is the nearest lube-producing area to the large eastern market. Also, domestic demand for all United States lubes has leaped upward in the first 5 months of the year. At the end of May it was 22 per cent over the same period last year. That rise takes on added significance when it is remembered that domestic demand in 1940 set a new all-time high, exceeding the previous peak of the boom year of 1929.

This increase is balanced to a degree by a 32 per cent drop in exports in the first 5 months of the year over the January-May period in 1940, yet May shipments overseas advanced to more than 1 million barrels, close to the level of the big war demand late in 1939 and early in 1940.

Combined domestic and export demand for 1941 period is 402,000 bbl. greater than the first 5 months of last year, an increase of a little less than 3 per cent.

As a result of that demand inventories of Pennsylvania neutrals were down to 137,796 bbl. at the end of June, according to the National Petroleum Association, the lowest in over 2 years. In the first 6 months of the year, shipments of neutrals totaled 1,075,946 bbl., compared with 932,467 in the same period of last year, or an increase of about 15 per cent.

Inventories Reduced

Inventories of Pennsylvania bright stock have been cut down sharply in the last few months. At the end of June inventories totaled 280,019 bbl., down from 477,891 bbl. in February, the highest point in over 2 years. Yet the June level was still above the low point of 167,784 bbl. in October 1939 when export demand for bright stocks was running high. Shipments of bright stock in the first half of the year totaled 1,121,416 bbl. against 844,968 in the same period of 1940, an increase of about 32 per cent. However, shipments this year were 214,555 bbl. less than in the first half of 1939.

The sharp upsurge in demand has increased minimum prices for neutrals a little above the peak of January 1940 while bright stock is still under the 1940 figures. Rising from 15 cents minimum early in 1939, prices for 200-viscosity neutral, 25 pour, mounted to 31 cents in January 1940 and then dropped to a 21-cent level in July and remained there until the rise began this spring. The upward trend continued until the minimum price reached 33 cents at the first of

TABLE 1—DOMESTIC DEMAND FOR LUBRICANTS IN BARRELS

(Data from Bureau of Mines)

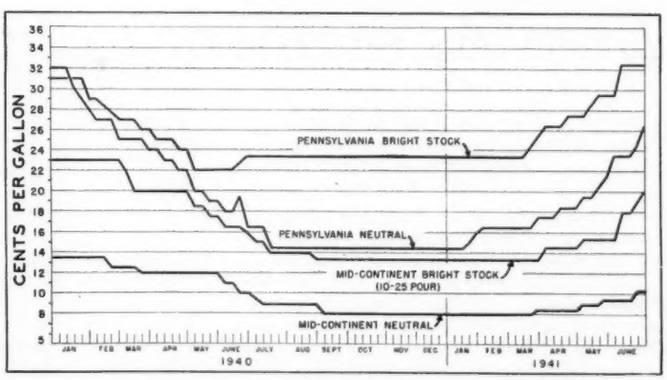
	1939	1940	1941
January	1,609,000	2,054,000	2,367,000
February	1,653,000	1,522,000	1,797,000
March	1,998,000	1,883,000	2,263,000
April	1,770,000	2,138,000	2,712,000
May	2,132,000	2,063,000	2,732,000
June	1,902,000	2,146,000	.....
July	1,982,000	1,871,000	.....
August	2,034,000	2,024,000	.....
September	2,235,000	2,150,000	.....
October	2,656,000	2,482,000	.....
November	1,927,000	2,449,000	.....
December	1,825,000	1,875,000	.....
Total	23,713,000	23,657,000	.....

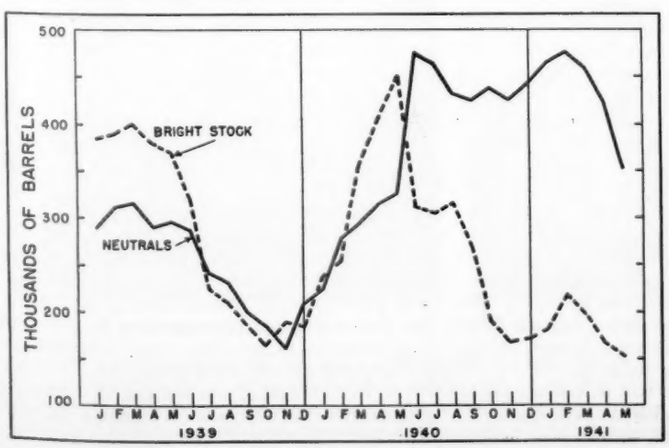
TABLE 2—EXPORTS OF LUBRICANTS IN BARRELS

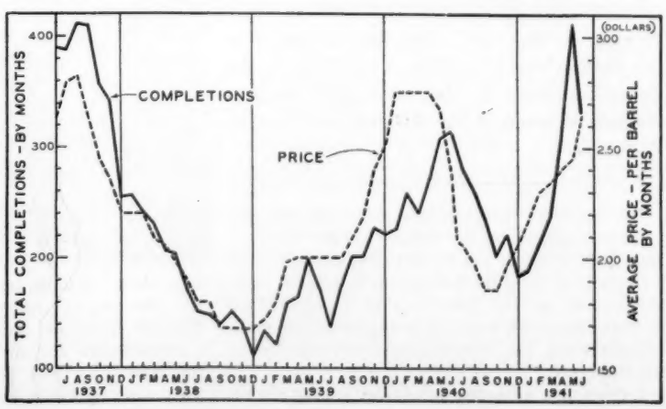
(Data from Bureau of Mines)

	1939	1940	1941
January	851,000	1,068,000	534,000
February	680,000	1,089,000	744,000
March	828,000	1,193,000	703,000
April	816,000	1,161,000	775,000
May	981,000	1,173,000	1,118,000
June	1,101,000	1,075,000	.....
July	1,022,000	741,000	.....
August	1,133,000	727,000	.....
September	984,000	393,000	.....
October	985,000	615,000	.....
November	1,190,000	671,000	.....
December	1,310,000	588,000	.....
Total	11,881,000	10,494,000	.....

Charts show response of Pennsylvania lubricants to demand. The steady advance of prices since early spring is shown at the right. Since June the trend has continued upward. Stock curves, below left, show depletion of inventories. The anomaly of rising crude prices against declining well completions is charted below at the right







August. The price range for 150 viscosity, 25 pour, was from 13 cents in January 1939 to 28 cents in January 1940. It dropped to 19 cents in July and remained there until April 1941 when the rise began. On August 1, the minimum price was 31 cents and the maximum 38. Bright stock, 25 pour, rose from 14 cents in January 1939 to a peak of 32 cents in January 1940. It dropped to 12 cents in August and remained there until February 1941. It mounted to 25 cents on August 1, well under the 32-cent peak of January 1940.

Production Down 9 Per Cent

Meanwhile region crude production is down from 11,841,000 bbl. in the first 5 months of 1940 to 10,780,000 bbl. in a like period in 1941, a drop of about 9 per cent. Runs to stills are off in about the same proportion—11,897,000 bbl. in 1940 to 10,946,000 in the same period in 1941. Runs are in excess of production by 166,000 bbl. in the first 5 months of 1941, according to Bureau of Mines figures, compared with an excess of 56,000 in the January-May period in 1940.

Crude stocks are down to a new low, 3,835,369 bbl. at the end of June, according to the N.P.A., compared with 4,170,722 bbl., 1 year ago, or a drop of 335,353 bbl.

The increase in domestic demand is stemming from the national-defense program, region refiners believe, lifted by increased use of autos and the rise in industrial activity. Government purchases for the Army and Navy are not as great as they probably will be when the tanks and bombers start to roll out in ever increasing numbers later on.

Many economists feel that the demand for lubes parallels the level of business activity. Barron's Weekly business index stood at 105.4 (adjusted for long-term trend) at the close of the week ended July 26, 26 per cent above a year ago and above the October 1929 level. Although the level of demand may continue high, the sharp rate of increase in the past few months may seem greater than it actually is since it is contrasted against a normal seasonal decline at this time of the year. Furthermore, many industrial plants are at the limit of capacity. Some industries may be facing shortages of raw materials, especially in the consumer goods industries with those materials going into national defense. Rationing of gasoline, if it comes, may also cut into lube demand.

TABLE 3—LUBRICANT PRODUCTION, STOCKS AND DEMAND

(Thousands of barrels. Bureau of Mines data)

Year—	Production	Stocks	Domestic demand	Exports	Total demand
1925	31,055	7,253	20,581	9,678	30,259
1926	32,293	7,576	22,568	9,435	32,003
1927	31,721	7,860	21,669	9,776	31,445
1928	44,658	8,340	23,168	11,023	34,191
1929	34,359	8,269	23,609	10,860	34,469
1930	34,201	10,971	21,589	9,935	31,524
1931	26,704	9,485	19,924	8,128	28,052
1932	22,433	8,465	16,614	6,851	23,465
1933	23,775	7,100	17,152	8,218	25,370
1934	26,373	7,331	18,484	7,660	26,144
1935	27,853	7,025	19,661	8,499	28,160
1936	30,297	6,942	22,323	8,691	31,014
1937	35,321	7,512	23,323	10,975	34,298
1938	30,826	7,695	21,233	9,417	30,640
1939	35,036	7,142	23,713	11,881	35,594
1940	36,765	8,767	24,657	10,494	35,151

PENNSYLVANIA GRADE REFINED PRODUCTS

(Data from National Petroleum Association)

	Bright stocks		Neutrals	
1939—	Shipments	Inventories	Shipments	Inventories
January	157,770	387,083	148,252	288,413
February	165,305	391,905	142,463	309,880
March	195,914	403,922	164,855	310,943
April	203,558	380,467	163,323	291,341
May	205,061	370,928	154,032	296,375
June	227,377	319,531	158,123	287,315
July	280,986	224,313	208,121	241,517
August	266,897	211,840	162,309	232,152
September	215,513	185,852	207,554	200,039
October	220,814	167,784	241,589	186,367
November	159,075	189,217	229,799	163,980
December	211,336	187,790	164,844	209,537
Total	2,509,606		2,146,264	
1940—				
January	150,478	236,953	159,271	226,449
February	178,121	255,527	134,903	280,266
March	97,102	362,986	143,681	296,403
April	131,212	410,517	154,299	316,767
May	150,954	445,972	165,462	326,384
June	137,101	477,756	174,851	310,395
July	147,627	462,642	145,130	303,807
August	182,678	431,305	176,112	313,537
September	156,698	424,023	197,017	268,833
October	138,432	437,020	238,646	187,803
November	147,976	426,749	191,457	166,058
December	127,949	442,590	173,449	172,475
Total	1,746,328		2,054,278	
1941—				
January	145,834	463,609	155,671	180,348
February	140,649	477,891	137,665	218,149
March	171,925	458,458	188,833	195,662
April	199,293	422,581	202,786	167,111
May	227,032	351,450	181,505	150,508
June	236,683	280,019	209,486	137,796

Eleven Companies Submit Draft of Proposed Pipe-Line Agreement to Ickes

WASHINGTON, D. C., Aug. 11.—Details of the proposal to construct the longest single pipeline system in the world in an effort to build up vitally needed transportation facilities for petroleum along the Atlantic seaboard were made public today by Defense Petroleum Coordinator Harold L. Ickes.

The plan, submitted by 11 of the largest oil companies in the country, contemplates an immediate start on the new network and its probable completion within 9 months.

A map of this line, with the exception of the portion extending from East Texas to the Texas-Louisiana border, was published in the July 17 issue of The Oil and Gas Journal, Page 15.

Mr. Ickes warned that the effect of the new 1,820-mile system on the eastern supply of petroleum products will not be felt soon enough to be a factor in solving the immediate petroleum problem caused by the deficiency in transportation facilities resulting from the transfer of American tankers from the Gulf-to-East Coast service to the British.

A draft of a proposed agreement among the oil companies which are cooperating in the construction of the line, to become effective upon the issuance of a presidential proclamation declaring the necessity of the proposed pipe lines in the national-defense effort, was submitted to Mr. Ickes.

Under this agreement, two privately owned corporations would be established to handle the construction and operation of the system. The larger of these companies, to be called the National-Defense Pipe Lines, Inc., will be an $80,000,000 corporation, and would build and operate all of that portion of the line outside of the State of Texas. The smaller company, to be called Emergency Pipe Lines, would construct, operate and maintain an 11-in. line originating at a point in the East Texas field and extending northeasterly to the Texas-Louisiana border, a distance of approximately 65 miles. From the Texas-Louisiana junction to a point near Salem, Ill., the line will be 22 in. in diameter.

Connecting Line

A 16-in. connecting line from Wood River, Ill., will join with the southern line at Salem. This line, about 65 miles long, will tap existing facilities carrying oil from Oklahoma, Kansas, Texas, Mid-Continent and Illinois areas.

From Salem a 24-in. line will be constructed to the New York and Philadelphia refining areas. This line, approximately 1,200 miles in length, will also branch out to bring crude to other refining centers.

Necessary tank farms, tankage, pumping stations and equipment to deliver an aggregate of 250,000 bbl. of crude daily to terminal points at Bayonne and Marcus Hook will be constructed.

Both companies would be financed entirely by private capital. It is proposed that approximately 80 per cent of the entire cost will be raised through private placement of notes maturing over a 5-year period. The remaining 20 per cent would be obtained through the issuance of junior securities of capital stock, which would be purchased by the participating companies on a percentage basis.

Other Companies May Participate

The proposed agreement provides that any other companies who may desire to participate in the building and use of this project may do so within 3 months after the formal execution of the agreement upon the same terms and conditions as those who have thus far tentatively committed themselves to go forward with the plan.

Companies which have agreed to participate in the construction project are as follows: Standard Oil Co. of New Jersey; Consolidated Oil Corp.; Sun Oil Co.; Atlantic Refining Co.; Cities Service Co.; Socony-Vacuum Oil Co., Inc.; Tide Water Associated Oil Co.; Texas Corp.; Shell Oil Co., Inc.; Gulf Oil Corp., and Pan American Petroleum & Transport Co.

Commenting upon the proposal, Mr. Ickes said: "The companies which have formulated this plan already have made considerable progress towards getting this vitally necessary project under way with a minimum of delay. Survey parties are in the field and aerial photographing of the route is in progress. In fact, this phase of the project probably will be completed within the next week or 10 days, assuring the making of maximum progress once it is possible to begin actual construction."

Chairmen Meet With Ickes to Define the Industry's Position

By HENRY D. RALPH

WASHINGTON, D. C., Aug. 11.—Procedure to be followed in attacking problems growing out of the effort to accommodate the petroleum supply to the civilian needs of the nation and of the defense program was discussed at a meeting Monday of the chairmen of the general district and four functional committees in each of the five regions of the United States with Defense Petroleum Coordinator Harold L. Ickes and his staff.

The general purpose of the meeting was to define the position and duties of the industry committees in relation to their work with the coordinator's office.

Mr. Ickes opened the meeting with a statement in which he urged the industry committees to establish initiative in working out a program by which an adequate supply of petroleum and products will be made available for all foreseeable needs, including shipments to Britain, Russia, and other countries engaged in fighting the Axis Powers.

No other industry has been called upon to work with the federal Government in the way the oil industry has been called upon, he said, adding that the joint effort was affording "an excellent example of government and industry working together on problems common to both and vital to the country. The Government wants to work out the problem with you and we are going to work it out with you," he declared. "There's a lot to be done. Cooperation will get the necessary results."

Among the problems the coordinator said should be attacked immediately was that of insuring a continuing and adequate supply of aviation gasoline both to serve domestic needs and those of Great Britain and Russia.

Deputy Coordinator Ralph K. Davies told the meeting that it was going to be up to the industry itself to make the joint federal-industry plan solving petroleum problems work. The industry, he said, has a marvelous opportunity to demonstrate that industry can do the job and do it well with a minimum of direction by government.

Discussing problems confronting the industry, the deputy coordinator said it was perfectly apparent as of this date that supplies of steel or other materials would not be adequate to satisfy the normal requirements of the petroleum industry and that the idea of business as usual as applied to the oil industry, therefore, was out.

In connection with a growing shortage in transportation facilities, the deputy urged oil companies to put to active use immediately any available tank cars. He said the companies should not permit idle tank cars to continue in the face of the fact that certain sections of the country are being confronted by a stock shortage of large proportion.

After the general meeting, the various functional committee chairmen representing the production, refining, transportation, and marketing branches of the petroleum industry, met with the divisional directors on the coordinator's staff responsible for the coordination of the efforts of each of those branches. Chairmen of the five general district committees also met as a group to discuss general problems.

The meeting was attended by all 25 of the committee chairmen. Names of these men and their industry affiliations were presented in an article starting on Page 12, The Oil and Gas Journal, July 17, 1941.

GRADY H. VAUGHN

E. O. BUCK

Grady H. Vaughn of Dallas, Tex., has been appointed by Petroleum Coordinator Ickes, as director of producing operations in District 3 with headquarters in Houston, Tex. E. O. Buck, formerly a production engineer for Gulf Oil Corp., the Texas Railroad Commission, the Association of Conroe Operators, Land and Royalty Owners and more recently a consultant, has been appointed associate director of production in District 3

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Oil-for-Britain Day Still Subject of Controversy

AUSTIN, Tex., Aug. 12.—A sharp controversy between members of the Railroad Commission and oil operators was still being waged this week, leaving in doubt status of the Texas-oil-for-Britain Day August 17.

Organized opposition to the oil-gift plan reached the commission in the form of a request from 35 companies and operators for further consideration of the problems involved. Jerry Sadler, member of the commission, launched an attack against the protesting companies and declared that their legal objections were a camouflage for their desire not to cooperate.

Objecting producers pointed out that officers of corporations lacked authority to give away assets and that obligations for severance taxes, to royalty owners, to holders of oil payments and to owners of other outstanding interests of various forms tied the hands of numerous operators.

Much oil property is under joint ownership, the objectors pointed out. In such instances, the operating party could not give away oil without the consent of the nonoperating party. Other properties are burdened with oil payments, overriding royalties and mortgages and the producers could not give away the oil without the consent of all interested parties.

The chief practical argument against the plan was that Great Britain is already getting, under terms of the Lease-Lend Act, every barrel of oil that can be transported in the available tankers. Gifts, the objecting companies contend, would not increase the British supplies but would shift the cost now met by ratable taxation, to certain oil operators.

An effort to include Louisiana fields in the plan to give 1 day's production to the British ended as a suggestion. Gov. Sam Jones declared Louisiana producers had given the proposal lukewarm reception and the state Minerals Department decided to drop the idea rather than have the donation made other than voluntarily.

At midweek the Texas Railroad Commission had not retreated from its August 4 order designating next Sunday as the day for producing a day's allowable to be turned over to the British. The commission has prepared forms for execution by producers participating in the plan and these will be turned over to President Roosevelt or his designated representative, according to the regulatory board's program. Royalty owners who do not contribute their portions of the oil produced under the British aid plan will receive a warrant from the carrier moving the oil, according to Olin Culberson, another commissioner, in commenting Monday on arrangements. The U. S. Treasury Department authorized Mr. Culberson to clarify the royalty-owner angle, he said. It was assumed that the Government would use lend-lease funds for reimbursement of the carrier who is directly responsible to the royalty owner.

STATE CAPITALS...

TEXAS

INDICATED PRODUCTION of 41,337,382 bbl. of crude oil in June, reported last week by the Railroad Commission, fell 1,685,233 bbl. below allowable for that month. The underproduction of 3.92 per cent is a slight gain from the May deficiency of 3.64 per cent.

Lease storage during June increased 4,988 bbl., over May for a total of 4,455,931 bbl.

Heaviest lease storage was in East Texas where crude stocks totaled 944,818 bbl. at the end of June and in West Texas where inventories aggregated 940,200 bbl. Crude stocks in other districts were: Southwest Texas, 765,056 bbl.; Gulf Coast. 692,292; East Central Texas, 84,597; West Central Texas, 237,223; North Texas, 533,980, and the Panhandle 257,765 bbl.

Runs to pipe lines for June totaled 40,901,931 bbl., tank cars handled 26,200, and trucks 305,638 bbl. Consumption of crude as fuel in field operations totaled 9,371 bbl. and miscellaneous uses amounted to 10,112 bbl.

ILLINOIS

METHODS OF ENFORCING the new oil and gas-conservation law will be discussed by representatives of the Department of Mines and Minerals and the petroleum industry at a meeting to be called within the next 3 weeks.

One of the first controversial questions to be settled is the proposal that all drilling permits be held in confidence by the Department of Mines and Minerals for 1 month. Many factions in the Illinois petroleum industry have protested against the secrecy proposal, contending that there is no provision in the law permitting the department to withhold information on drilling permits.

The law requires payment of a $10 fee for drilling permits and $1,000 bond to insure proper handling of wells.

LOUISIANA

DUE TO A RECENT court decision invalidating the recently reorganized Louisiana administrative setup, the regulation of the oil industry has reverted to the Department of Conservation. The Department of Minerals will become the Division of Minerals under the department, and Joseph L. McHugh retains his position as director of minerals, under Conservation Commissioner W. H. Hodges.

B. A. Hardey, C. C. Sheppard, R. L. Knox, James Smither and Gov. Sam. H. Jones, who formerly constituted the Board of Minerals, governing body of the Department of Minerals, under the reorganized administration will make up the state Mineral Board, whose function will be to lease and develop state lands. Major Hardey was formerly chairman of the board, and Governor Jones exofficio member. The board will organize this week, electing a chairman.

The changes in the administration are not expected to affect in any way the new policies and benefits which attended the election of the Jones administration. The state's new model conservation law remains in effect and the advanced policies of unitization, wide spacing and conservation will continue.

EVIDENCE OF MARKET DEMAND from producers and purchasers of crude oil and natural gas for September and October will be presented August 18 at New Orleans, La., before the Department of Conservation. The statewide hearing will start at 9:30 a.m. at the Monteleone Hotel.

All purchasers of crude and natural gas have been requested to present evidence at the hearing or file notarized briefs by registered mail setting out their nominations for the 61-day period on or before August 18.

MISSISSIPPI

OPERATORS of the Tinsley field, Mississippi's only major pool, met last week in Jackson and agreed to a nominal reduction in production from the field. The move was incited by petitions to the state to institute proration in the field, and voluntary reduction of withdrawals is expected to result in dropping the proration movement.

Tinsley production has in recent weeks averaged between 45,000 and 50,000 bbl. daily. The field comprises about 221 wells, half of which are on artificial lift. Accumulative production passed the 10,000,000-bbl. mark last week. The agreement among producers to limit production to 500 bbl. per well per day still allows a total production well over 50,000 bbl. daily, but the current rate is augmented largely by excessive withdrawals from a few wells in the field, with remaining leases operating considerably under the 500-bbl. average per well.

A hearing called by the state Oil and Gas Board earlier last week resulted in no action when neither proponents nor opponents of proration offered testimony.

SPONSORED OIL GIFT . . .

JOHN F. CAMP, San Antonio, Tex., oil producer, was the chief proponent in the early stages of proposals that Texas operators contribute 1 day's output to aid Britain. Mr. Camp pledged 5,000 bbl. of his production to start the voluntary contribution

CALIFORNIA

THE CONSERVATION COMMITTEE of California Oil Producers is scheduled to meet in Los Angeles next week to set the September allowables for California oil producers. This will be one of the most important meetings in several months because it is logical to assume that some action will be taken to prevent state production and demand from going too far apart. Developments during the past 2 months have, without exception, been of a bearish nature and it would appear propitious to get production down to a point where no great accumulation can take place in stocks. The committee will undoubtedly give consideration to the cessation of export shipments of crude and refined oil to Japan, elimination of intercoastal shipments to the Atlantic seaboard for domestic consumption and the possibility that additional transfers of tankers may restrict the movement of refined oil to the Pacific Northwest.

It would seem better to reduce September crude-oil production 10,000 or 15,000 bbl. per day rather than wait until the last minute and then attempt to knock off anywhere from 25,000 to 50,000 bbl. daily. Every indication points to the probability of restricted movement and there is no reason to believe that marketers will change their minds and begin to accumulate stocks again. One of the most interesting features in connection with present conditions is that it should prove advantageous to stimulate production of heavy crude oil and shut in production of light refinable grades of crude. If conditions become acute this practice will undoubtedly be followed. There seems to be a difference of opinion as to what constitutes heavy crude oil among engineers but the practical oil man knows the difference and it does not include crudes approximating 25°.

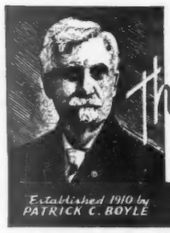
KANSAS

HEARING TO DETERMINE crude-oil allowable in September will be held by the Corporation Commission at the Allis Hotel, Wichita, Kans., August 21. The state's oil fields are currently producing under an allowable schedule of 242,800 bbl. daily. Purchasers have been asked to file crude nominations for next month on or before the August 21 hearing.

GEORGIA

A GRAVIMETER SURVEY of counties in the south-central and southwestern parts of Georgia is now being arranged by Garland Peyton, state geologist.

The survey has been authorized by Zack Cravey state commissioner of natural resources. Results of the survey will be made available to oil companies and operators holding acreage in Georgia.



The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

As Regards Priorities

Current discussions as to the materials required for oil operations lead inescapably to two conclusions which should be controlling in applying priorities to oil.

In the first place, a substantial reduction in supplies will quickly restrict civilian use and if continued over any length of time will seriously jeopardize the industry's preparedness position.

In some circles the fact that the oil business was found ready, when a check of the country's defenses was made last year, is being used against it. Representatives of the Government have argued that since there was an abundance of oil others less fortunately situated should be favored in the distribution of materials.

Output is now on a basis of more than 1½ billion barrels of petroleum annually. In volume the industry is four times what it was during the other world war.

A quarter-century ago petroleum operations were largely adaptations from the practices of other industries. Now its technology is outstanding, drawing on many sciences in the development of arts which are unique among all industrial enterprises.

To assure new discoveries to take the place of those being depleted at the rate of more than 4 million barrels daily, oil explorers are constantly extending their search into new areas. Certainly no one will contend that these activities should be restricted, including the drilling of thousands of wildcat tests.

A great deal will be heard soon about well spacing, unit operation and other conservation plans. Producers cooperating with the states have made steady progress in the application of these conservation practices. Something more can be accomplished but this does not mean reductions of 25 per cent in drilling. When the drill stops the oil supplies stop. Operators know that from the periods of the past when they were forced to shut down their rigs due to ruinous price conditions.

A comparable situation is found in the manufacturing operations. Refining, of necessity, is continuous. There are a large number of plants which have never been shut down in more than 25 years. These refineries cannot operate if they do not have hundreds of maintenance items. Savings through shutdowns or curtailments would be of no importance when compared to losses due to lowered efficiency.

The second conclusion has to do with petroleum's indispensability. Never was it more apparent than it has been over the past few weeks when consumers have been considering the effects of possible rationing.

Investigators have found there are either no substitutes for petroleum or those suggested for certain uses are entirely inadequate. The family car is the most essential facility of the home. Nothing can take the place of buses, tractors, trucks and hundreds of other applications of motor and stationary petroleum power. Millions of homes and thousands of industries and allied enterprises, are entirely dependent on petroleum for fuel.

Due to the initiative of American companies, this country and its neighbors to the immediate south have more than 75 per cent of the world's petroleum. The longer the war continues the more important will this control of oil become. If operators are permitted to maintain and expand existing facilities, the Eastern Hemisphere will have to look to this part of the world for more than half of its petroleum in the postwar adjustment period. This will be more important than any possible expansion in military might.

Oil has become the measure of a people's capacity to produce and defend themselves. Operators and the representatives of the oil states have a patriotic duty in seeing that official shortsightedness does not result in priority policies which will end the nation's leadership in this most basic commodity of war and peace.

Operators Have Confidence in Texas' New Chief Executive

By HARRY BENGE CROZIER

We asked Mr. Crozier, former director of publicity of the American Petroleum Institute and a veteran Texas newspaper writer, to tell us something about Coke Stevenson, who on Friday was formally inaugurated governor of the Lone Star State, succeeding Lee O'Daniel, now junior Texas senator at Washington.

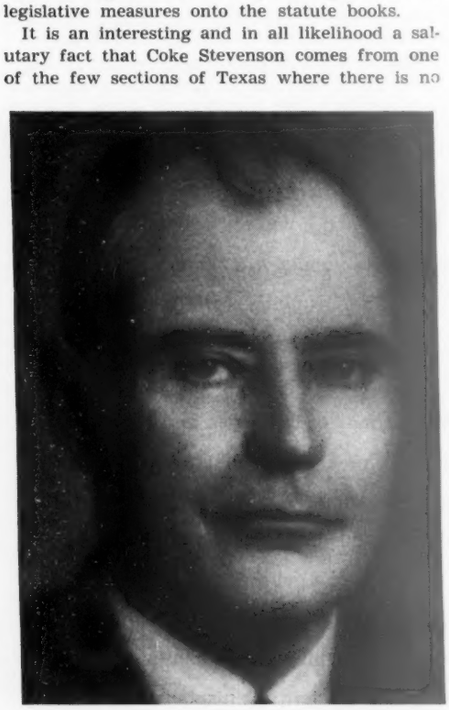
As governor of the state with more than 40 per cent of the industry's oil, it is probable that during his term major oil problems affecting the entire industry will be brought to his attention. He is regarded as a strong candidate for election to the office of governor when his present term expires.

Mr. Crozier is a personal friend of the governor and has followed his political course from its inception.

AUSTIN, Tex., Aug. 12.—Oil men, "little" oil men, "big" oil men; oil men who want lots of laws concerning their business and oil men who want fewer laws affecting them; in short the oil men of Texas repose a world of faith and trust in Coke Stevenson, the philosophic fellow who became governor of Texas a few days ago as a result of one of those byelections that often shuffle the cards in American statecraft. It has become apparent in the short while since Governor Stevenson moved into the executive offices that Texans generally, and especially business men and producers, regard his accession to the office with a deep feeling of satisfaction.

They believe in the soundness of his political philosophies because for a dozen years they have observed him, first as state representative, then twice as speaker of the house and finally twice as lieutenant governor, develop and guide sound legislative measures onto the statute books.

It is an interesting and in all likelihood a salutary fact that Coke Stevenson comes from one of the few sections of Texas where there is no oil production. He served as the representative of 10 West Texas counties in the legislature for 10 years. There was no producing oil well in any of those counties except Crockett on the far western edge. Indeed, Coke Stevenson has always been regarded as state minded in his legislative activities. Neither he nor the people he represented had axes to grind.



COKE STEVENSON

Constructive Compromiser

Seasoned observers who have watched the Stevenson political career remark most at his rare talent for constructive compromise and at the number of times he has exercised that talent in the last 12 years. There was the time when Gov. Dan Moody advocated removal of the state penitentiary to another part of the state and the inauguration of an industrialization program. Mr. Stevenson, the conservator, was appalled at the probable cost of such a move. He opposed the bill and was appointed as a minority member on a committee to make a survey. When the study was completed Mr. Stevenson came forward with a bill that outlined a course of modernization and industrialization of the prison system. The plan was particularly strong in its provisions for making the prison "live off its own lands." The plan was adopted and has materially improved conditions in the system.

Inspires Confidence

It is significant perhaps, too, that the Stevenson way of constructive compromise heals instead of wounds the conflicting elements. He did not employ his energies just to defeat Governor Moody's proposals. He wanted as much as Governor Sterling did to relieve the highway situation. It turned out the other day when he took the oath of office at formal ceremony that ex-Governors Moody and Sterling sat beside him on the rostrum of the house of representatives and both men in more than just words made manifest their faith and confidence in him.

Mr. Stevenson has made a success of the things he has undertaken. He operates and lives on a sheep, goat, and cattle ranch, 17 miles from the office where he practices law in Junction, Kimble County. He makes the ranch pay and he makes his law practice pay. With partners, he engages also in the hotel business, hardware business, an automobile sales agency and garage, and a wool-warehousing business. Formerly he was president of a bank and directed the operation of the town's newspaper. He is 53 years old and he has moved about quite briskly, always near the home corral, since he gave up his first business enterprise, that of driving a six-horse team, drawing two wagons and freighting general merchandise including the first "store-bought" coffins the town had ever seen, between Junction and Brady, 65 miles away. Junction was his home town and Brady was the nearest rail's end to that Llano River hill-country town.

Stuff for an Alger Story

Alger could have worked up a right smart piece about the life and activities of Coke Stevenson. Let's summarize them ever so briefly. He was born in a log house over the line from his father's Kimble County home, in the Mason County home of his mother's father where she had gone to give birth to her first child. He was doing the work of a grown-up cowboy at the age of 10. By the time he was 14 he had crowded 22 months of schooling into his life and that was the extent of his formal education in the school room. His father had been a school teacher and surveyor.

At 16 he was in the freight-hauling business for himself and prospering when he applied for a job at the first bank ever organized in Junction. He had been studying a bookkeeping course around a camp fire on the 5-night trip to Brady and return. They gave him, instead, the job of janitor, but it wasn't long before Coke Stevenson was keeping the bank's books. At 20 he was cashier of the bank and it was necessary to go into court and remove the disabilities of minority.

His ways of studiousness never left him. He was attracted by the law and by Miss Fay Wright, daughter of a popular West Texas physician. He won the young woman and a license to practice law. He built the house for them to live in with his own hands. A little later he was county attorney and then was twice elected county judge. As county judge he managed to get the first section of hard-surfaced road that had gone to that section of the state.

They needed him as president of the bank about that time and he resigned to run the bank for several years until it was sold to the other bank in the town.

Legislator by Accident

Folks in Texas generally think of Coke Stevenson in terms of state government but it is a fact that his advent into state politics 13 years ago was unpremeditated and unintended. The member from that big district was retiring. A man that Mr. Stevenson didn't regard as representative of the district was offering for the place. Mr. Stevenson made trips to Menard and to Rock Springs to persuade friends to get into the race. When they refused he got into the race himself and was elected.

In his inaugural address Coke Stevenson made it plain that he is no specialist and has no governmental hobbies to ride. He declared his devotion to a government of laws and not a government of men and he made it equally clear that man's place in government is to enforce the law and that as governor that will be his concern.

In his public addresses Coke Stevenson is sparing of the first personal pronoun but he has a definite philosophy of life that can apply to the head of a state as well as the head of a household.

Watching WASHINGTON

By HENRY D. RALPH

Ickes again warns of mandatory rationing of gasoline . . . Assails lack of cooperation in voluntary curtailment . . . Russia granted transfer of four tankers . . . Roosevelt suspends load-line law . . .

WASHINGTON, D. C., Aug. 11.—Mandatory rationing of gasoline in the 16 East Coast states and the District of Columbia is getting closer and closer with the approach of cold weather and the resulting need for additional transportation capacity for fuel oil, Defense Petroleum Coordinator Harold L. Ickes warned late last week.

"At the rate we're going it isn't very far ahead," Mr. Ickes declared in response to a question as to the need for rationing. The coordinator highly praised the oil industry, stating that his office is "getting a lot of cooperation from the industry," but added that he "could do with a lot more of it from the driving public."

Mr. Ickes said that a very great increase in the amount of cooperation which has been shown in his voluntary program to decrease consumption will have to be shown in the near future if some system of involuntary rationing is to be avoided.

Despite insistent and repeated appeals for a voluntary cut of one-third in the use of motor fuels on the East Coast, he reported, deliveries of gasoline to service stations increased last week by 1,029,866 gal. over those of the previous week, a gain of almost 1 per cent.

"These figures are disappointing," Mr. Ickes declared. "The oil industry and the filling-station operators have been cooperating practically 100 per cent in the effort to obtain a reduction in the quantities of motor fuels consumed in the Atlantic Coast area.

"On the other hand, the reactions on the part of the public are not encouraging. Perhaps the public does not want to face the facts. Reports and advices received by this office would seem to indicate that there has not yet been a full realization of the seriousness of the problem we face."

Study Rationing Plans

Mr. Ickes revealed that his office is studying two or three rationing plans. If possible he wants to bring consumption in the eastern states down to the capacity of the transportation facilities without the use of ration cards. One of the plans which has been the subject of study would provide for the rationing of service stations by the suppliers, placing the burden on the individual service-station operator to see that no driver gets more than his share of gasoline.

It is felt that this program would cause fewer administrative problems to arise than the issuance of individual ration cards for every automobile driver. There are many reports that the service-station curfew will be extended to include Sunday closings immediately after the Labor Day week end. Mr. Ickes is said to be holding back on this until after most vacations have been concluded.

With respect to the aviation-gasoline situation, the coordinator warned that unless there is immediate expansion of refining capacity for 100-octane motor fuel, we will be facing a shortage of this vital war material within 6 to 8 months. The present plan is to double the refining capacity for aviation fuel.

This has been made necessary, he revealed, by the large increase in shipments to Britain, plus the new program designed to keep the Russian air force supplied with ample quantities of high-test gasoline.

Russians Seek Tankers

Mr. Ickes stated that the Russians asked for and have been granted use of four tankers from the American fleet to supplement their own tanker fleet. These tankers, he said, will be taken from the Pacific Coast service which will, in turn, extend the present East Coast shortage of transportation for petroleum products to the West Coast.

These tankers are to be loaded with aviation gasoline immediately and started on the way to Vladivostok, Russia, before the end of this month, when the first Russian tanker is expected to reach Los Angeles for loading. Shipments of aviation gasoline will also be made on cargo ships in drums, Mr. Ickes said. The first Russian cargo ship left the West Coast about a week ago, loaded with drums of aviation gas.

The West Coast is expected to feel the pinch caused by the transfer of the tankers to Russia shortly after August 15.

A formal recommendation has been sent by Mr. Ickes to operators of commercial vehicles throughout the 16 Atlantic Coast states and the District of Columbia requesting aid in the effort at voluntary curtailment of use of motor fuel through the following methods:

1. Elimination of bulk and wholesale deliveries on Saturdays.
2. A limitation on retail deliveries to not more than one per day.
3. Reduction in the number of deliveries of perishables to as few per day as possible.
4. Elimination of special deliveries.
5. Through adequate publicity, urging customers to cooperate by carrying small packages instead of requesting deliveries.

Simultaneously, Mr. Ickes wrote to the governors of the affected states advising them that the issuance of the proposal in the form of a formal recommendation eliminated any possibility that concerted action on the part of operators would be considered a violation of the antitrust laws. The recommendation, he said, has the approval of the Department of Justice.

Preliminary estimates made by the coordinator's staff of the probable saving in motor fuel resulting from this program range from 20 to 35 per cent.

Mr. Davies has announced the designation of H. A. Gilbert as director of transportation to represent the coordinator's office as liaison with the Maritime Commission on petroleum problems in connection with ocean transportation.

Mr. Gilbert, a resident of New York, is a member of the American Petroleum Institute and of its central committee on tanker and barge transportation.

President Roosevelt signed a proclamation Saturday suspending the provisions of the International Load Line Convention signed at London July 5, 1930, for the duration of the present emergency for all ports and waters of the United States, so far as the United States is concerned.

"In view of the pressing need for tonnage in the trade between the United States and the other American republics," Mr. Hull explained, "particularly tanker facilities for petroleum products, the shortage of which has a direct bearing upon national and hemispheric defense, the Department of State has conferred with the American republics that are parties to the convention, namely, Argentina, Brazil, Chile, Cuba, Mexico, Panama, Peru and Uruguay, all of which countries have agreed to the suspension."

Curfew on Gasoline Popular

Review of the first full week of the 7-to-7 curfew on filling stations in the Atlantic Coast area indicates a virtual 100 per cent compliance among station operators with little employment loss, it was reported Tuesday by Defense Petroleum Coordinator Harold L. Ickes.

In addition to the cooperation shown by the filling stations which were requested to participate in the nightly closing, Mr. Ickes said, requests are being received from station operators in adjacent areas asking permission to join in the curfew closing.

Participation of the stations, Deputy Coordinator Ralph K. Davies declared, is one of the "most remarkable demonstrations of cooperative aid ever given by an industry.

"Throughout the length and breadth of the Atlantic seaboard," he said, "individual businessmen dependent for their livelihood upon the earnings of filling stations voluntarily complied with our request that they join in the curfew.

"There was no legal compulsion for them to do so and they were so informed. They chose, however, to play their part in the defense of their nation and subordinated their personal schedules to the common good. I know of no similar accomplishment so universally accepted by an industry as this one. It has been, indeed, a remarkable demonstration."

International

Germany . .

Observers Contend Reich Oil Position Is Less Secure

GERMANY'S oil position since the outbreak of war with Russia is occupying the attention of many oil observers who believe that the Nazis' position may have deteriorated considerably as a result of this new phase of the conflict. The following reasons are cited for this belief:

1. The preoccupation of the German fighting forces in Russia has resulted in more severe raids by the British on German petroleum storage and synthetic-oil plants.

2. Russian airmen are reported to have carried out repeated air raids on the Rumanian oil fields and refining centers. Although results are conjectural, some damage is reported, according to the Soviet communiques.

3. Germany's use of petroleum must have been extensive in the Russian campaign so far. Distances traversed by the Nazi armies have been great and the large quantities of mechanized equipment used have been a factor in greatly increasing the daily use of petroleum products, particularly gasoline and lubricating oils. Nazi airmen have been forced to fly long distances from their bases in order to bomb objectives along the battle front and in the Soviet interior.

The situation in which Germany is finding herself with respect to petroleum will naturally become worse the longer the Soviet conflict is prolonged. It is impossible to pass any judgment on the length of the campaign in view of conflicting reports from the two sides. However, it is recalled that many believed the purpose of the Germans in the Soviet campaign was to gain control of the Caucasian oil fields, and eventually, by further marches into the Near East, to seize the Iran and Iraq fields.

The German armies are still 1,000 miles from the Soviet fields. These could be destroyed before the Nazis reach that point, it is believed. At the same time Germany has lost the supply of oil which she had been getting from Russia, reported to have been averaging about 3,000,000 to 4,000,000 bbl. annually.

The conclusion is, therefore, that Germany's oil position has been greatly affected, if not somewhat jeopardized, by the war with the Soviet Union. The outcome of the entire war might be changed by developments over the next few weeks, should the Germans fail to crush Soviet resistance before the fall rains set in, it is believed in well-informed oil circles here.

Argentina . .

Government Stimulates Production Operations

PRODUCTION of 10,646,002 bbl. of crude oil from fields of Argentina during the first 6 months of this year was reported last week by the Department of Agriculture in that South American country which has charge of government petroleum operations.

Production during the first half of this year represents a gain of nearly 8 per cent compared to output of 9,884,854 bbl. for the same period in 1940.

Yacimientos Petroliferos Fiscales, the government petroleum agency, produced 6,768,552 bbl. in the first half of 1941, compared to 5,775,785 bbl. in the first 6 months of 1940. Private companies produced 3,877,450 bbl. in the first 6 months this year against 4,129,069 bbl. in 1940.

Much of the gain of 17 per cent this year in YPF output is being produced from the new fields in the Province of Mendoza on the eastern edge of the Andes.

France . .

Effort Made to Develop Production Near Pinat

EFFORTS to develop oil production in France since the German occupation were revealed in reports reaching London that a well near Toulouse, in the southern portion of the country, recently caught fire and was for a time out of control. The first well in the area was completed in July 1939, just prior to the outbreak of war.

The discovery well is at Pinat, near St. Gaudens, and was reported to be producing oil at the rate of about 50 bbl. daily until recently. Oil operators from Rumania are reported to have been called to St. Gaudens to attempt to bring the new well under control.

FOREIGN OIL ADVISOR . . .

Max W. Thornburg, former vice president of Bahrein Petroleum Co., subsidiary of Standard Oil Co. of California and the Texas Co., has been appointed special assistant to Sumner Welles, undersecretary of state. His duties will be to advise the Department of State on international petroleum affairs. Mr. Thornburg's connection with Bahrein Petroleum which operates producing and refining properties on Bahrein Island in the Persian Gulf has given him wide opportunity in recent years to study European petroleum conditions

Mexico . .

Crude-Oil Production Rate Suffers Decline

CRUDE-OIL production from Mexico in March declined to 93,409 bbl. daily, a loss of 7,385 bbl. in the average rate of withdrawals compared to February when the output averaged 100,794 bbl.

For the first 3 months this year, Mexico's production totaled 9,677,002 bbl., compared to 10,097,650 bbl. for the same period in 1940.

FIRST QUARTER PRODUCTION IN BARRELS

Month—	1940	1941
January	3,091,352	3,959,084
February	3,109,240	2,822,229
March	3,897,058	2,895,689
Total	10,097,650	9,677,002

The Poza Rica field produces nearly 60 per cent of the total for all Mexican districts. In March, Poza Rica produced 1,647,955 bbl., or 57 per cent of the country's output. The isthmus region and North Tampico each produce about 500,000 bbl. per month and the remainder comes from South Tampico.

FIRST QUARTER PRODUCTION BY DISTRICTS IN BARRELS

Month—	North Tampico	South Tampico	Poza Rica	Isthmus area
January	589,172	344,025	2,517,730	508,157
February	411,983	271,847	1,677,291	461,108
March	445,992	274,444	1,647,955	527,298
Total	1,447,147	890,316	5,842,976	1,496,563

Another Payment Made

Another payment of $1,000,000, making the total received so far stand at $5,000,000 has been made to Consolidated Oil Corp. by the Mexican Government. The payment was the fifth made by Mexico in settlement for oil properties expropriated from subsidiaries of Consolidated Oil Corp. There remains to be paid $3,500,000 under terms of the settlement which was negotiated by the company and the government.

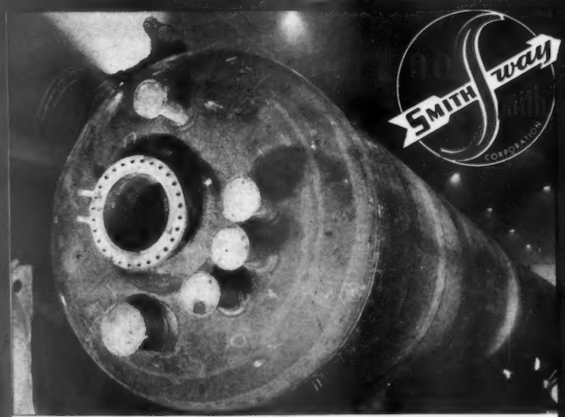
Venezuela . .

Second Santa Barbara Oil Well Nearing Completion

VENEZUELAN PETROLEUM CO., controlled by Consolidated Oil Corp., is now working on completion of 2 Santa Barbara, in eastern Venezuela. The third and fourth tests on the Santa Barbara concession have been spudded, it is understood. The second well is said to be showing for production and will extend the proven area of the field.

Nearly 3,000,000 lb. of Smithlined Pressure Vessels, in one train, on its way from Milwaukee to the Eastern seaboard.

BIGGEST VESSEL SHIPMENT IN HISTORY . . . .



● *One of the sixteen Smithlined Vessels for this foreign customer, ranging in weight from 18,900 lb. to 260,000 lb. each.*

● *The largest Smith Vessel in this record shipment, measuring 12'-10" I.D. x 2¼" wall x 59'-9⅛" overall length, loaded on a special railway car.*

WHEN a foreign Oil Company urgently required Cracking Vessels for one of its large refineries, A. O. Smith was selected to manufacture this vital equipment.

Sixteen heavy Smithlined Vessels, totaling almost 3,000,000 lb. and constituting *the biggest train shipment of such Vessels to date,* were carried on a thirty-car train to the Atlantic Coast.

Thus again has A. O. Smith proved that no Pressure Vessel job is too big for its vast facilities nor too complicated for its engineering ability.

A. O. Smith Corporation, Milwaukee, Wisconsin. Offices at: New York, Pittsburgh, Chicago, Tulsa, Dallas, Shreveport, Houston, Corpus Christi, Los Angeles, Seattle.

DID YOU KNOW?

- That the economic welfare of the Oil Industry and that of the 6500 employees of the Smith Plant are interlocked, because—
- A. O. Smith is one of the *major* manufacturers of:
- *casing* for the oil producer—
- *line pipe* for the oil and gas transporter—
- *pressure vessels* for the oil refiner—
- *chassis frames* for automobiles and trucks—the biggest single *consumer* of petroleum products.

A. O. SMITH CORPORATION

Milwaukee, Wisconsin

PIONEER MANUFACTURERS OF ELECTRIC-WELDED

Pressure Vessels

Casing · Line Pipe

Humble Announces Personnel Changes

HUMBLE OIL & REFINING CO., production department, Houston, Tex., has announced the following changes in personnel:

C. C. Clifton, district superintendent, appointed division superintendent in charge of Louisiana division; C. H. Keen, district superintendent, formerly at Lovell Lake, appointed assistant division superintendent in Louisiana division; C. E. Capers, assistant division chief clerk in Gulf Coast division, appointed division chief clerk in Louisiana division; J. B. Stamey, assistant division chief clerk, transferred from North Texas division to Louisiana division; J. A. Sizer, division clerk in Gulf Coast division, appointed division material pusher in Louisiana division.

H. E. Potter, division petroleum engineer, formerly in East Texas division, transferred to Louisiana division as division petroleum engineer, J. S. Boldrick, district petroleum engineer, formerly at Tomball, Tex., appointed assistant division petroleum engineer in Louisiana division; H. A. Ratchford, assistant division civil engineer, formerly in Gulf Coast division, appointed division civil engineer in Louisiana division; P. E. Barber, office civil engineer, formerly in Gulf Coast division, appointed assistant division civil engineer in Louisiana division.

K. B. Davidson, assistant division petroleum engineer, formerly in East Texas division, appointed division petroleum engineer in North Texas division. E. E. Williams, tool pusher, formerly at Galveston Bay, Tex., appointed district superintendent in charge of Potash district; E. A. Greene, district superintendent, transferred from Anahuac district to Maurbro district; G. E. Carpenter, division safety engineer in Gulf Coast division, appointed regional industrial relations manager and division safety engineer in Louisiana division.

R. K. Tracy, district superintendent, transferred from Maurbro district to Lovell Lake district; B. D. Bell, district superintendent, transferred from Dickinson district to Anahuac district; John S. Bell, division petroleum engineer, transferred from North Texas division to East Texas division; J. I. Cochran, assistant district superintendent, formerly at Tomball, appointed district superintendent in charge of the Chalkley district; B. W. Moller, district petroleum engineer, transferred from Dickinson district to Tomball district.

H. J. McDonald, assistant district chief clerk in Kelsey district, appointed division material pusher in Southwest Texas division; W. S. Ham, district chief clerk, transferred from Magnet district to Maurbro district; E. W. Daniel, assistant district chief clerk, appointed district chief clerk in Magnet district; E. M. Jones, assistant district chief clerk in Sand Hills district, appointed district chief clerk in Hurdle district; A. L. Pate, assistant district chief clerk in Anahuac district, appointed district chief clerk in Livingston district.

Joe Bishop, district gas superintendent, transferred from Pledger Natural Gas System to Tomball Natural Gas System; Jarrett S. Smith, district gas superintendent, transferred from Tomball Natural Gas System to Pledger Natural Gas System; A. L. Cantrell, assistant district chief clerk, appointed district chief clerk in Bayou Sale district, and J. G. Sloan, district superintendent, transferred from Chalkley district to North Crawley district as superintendent in charge of operations.

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DEATHS

DAVID J. SELLARD, 79, retired Oil Well Supply Co. engineer, died at his home in Oil City, Pa., last week after an illness of several years. His wife and a daughter are among the survivors.

J. NICK PARRISH, 69, who pioneered in the development of Corsicana, Tex., as an oil center, died last week at his home in Emhouse, Tex. His wife, two daughters and a son survive.

M. J. TENNES, SR., chairman of the board of directors of Shafer Bearing Corp., Chicago, Ill., is dead. His widow and three sons survive.

RICHARD H. FINDIESS, 58, a veteran wildcatter of Kansas for more than 18 years, died August 8 in a Wichita, Kans., hospital from injuries received in an automobile accident about a week earlier. Mr. Findiess was the discoverer of the Florence pool of Marion County. His widow survives.

S. W. RITER, 45, Tulsa geologist, died last week near Rangely, Colo., while on a field trip for Gulf Oil Corp. It is believed he died of a heart attack. Mr. Riter had been with Gulf since 1925, and served 2 years in Mexico and Venezuela before coming to Tulsa in 1927.

W. S. MYRICK, superintendent of gas distribution for Memphis Light, Gas & Water Division. He was 78. Mr. Myrick went to Memphis from Peoples Gas Light & Coke Co., of Chicago, in 1903, and had worked for the Memphis utility ever since.

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Exposition Committee Will Meet August 22 in Tulsa

Subcommittees to handle details of assembling Hall of Science exhibits for the May 16 to 23, 1942, International Petroleum Exposition, will be named in Tulsa August 22 when Dr. Gustav Egloff, scientific and technical committee chairman, will be in the city to meet with his group.

Mr. Egloff, who is also research director for the Universal Oil Products Co. of Chicago, is being assisted in plans for the Hall of Science by co-chairman Dr. B. B. Weatherby, of Amerada Petroleum Corp.

Plantation Pipe Line Co. Applies For Federal Aid

WASHINGTON, D. C., Aug. 12.—The first formal application for federal aid in securing rights-of-way for construction of a petroleum pipe line under the provisions of the recently enacted Cole Pipe Line Act has been received from Plantation Pipe Line Co., sponsor of a 1,200-mile products line from Baton Rouge, La., to Greensboro, N. C., it was reported today by the office of petroleum coordinator.

Officials of the coordinator's office were informed by the company that most of the materials needed for the line are available, that contracts for actual construction have already been let, but the inability to secure certain portions of the right-of-way, particularly in Georgia, is holding up construction.

This line, Deputy Coordinator Ralph K. Davies said, "is one the coordinator's office is especially desirous of having constructed as expeditiously as possible."

Pointing out that the project could be completed by late December if legal obstacles were removed, Mr. Davies stated that the line would be of practically immediate utility in alleviating the shortage of petroleum products in the Atlantic coastal area.

It will require the issuance of a presidential proclamation for Plantation to receive the privilege of exercising the right of eminent domain. Such a proclamation would declare the president's finding that the line is necessary for national defense and would set forth the terms and conditions under which it is to be constructed, owned, operated and maintained.

THE MARKETS*

CRUDE OIL: Vigorous demand for crude in sections of the country supplying interior markets continues without abatement. Texas, New Mexico and Louisiana markets are a little less active because of the uncertainties surrounding transportation to the East Coast. Reports continue of premiums offered for connections in parts of the country where demand is least satisfied, particularly in the Middle West and portions of the Mid-Continent.

REFINED PRODUCTS: Prices are firm to stronger in most sections exclusive of the Gulf and Pacific coastal zones. Prices in California are trending to softness. Gulf Coast refiners are mostly marking time awaiting further developments. Inability to move additional supplies from the gulf is working against active trading. The embargo against shipments of crude and products to Japan is reacting on California markets.

TANK-WAGON AND POSTED DEALER: Upward adjustments of subnormal prices in Nebraska, Illinois and Missouri have been made within the past week. Other marketing areas are steady. Probable objection from OPACS to any general increase in the consumer market for petroleum products is preventing normal movement in relation to supply and demand.

FINANCIAL: Oil securities receded slightly from the high for the current movement established a week ago. Average of 30 representative stocks for the week ended August 9: High, 27.60; low, 26.40; close, 26.53. Week ended August 2: High, 27.88; low, 26.98; close, 27.30.

*Detailed information in market section.

Drilling in western Kansas, always active, has been on the increase in recent months. These scouts keep track of developments in the area for the major companies and meet weekly at Great Bend, Kans., for a check. From left to right: R. J. Gutru, Cities Service Oil Co.; W. O. Young and B. S. Brooks, Shell Oil Co., Inc.; M. F. Pryor, Darby Petroleum Co.; Tax King, Continental Oil Co.; W. G. Ross, Stanolind Oil Co., crude-purchasing department, and C. B. Dugger, Gulf Refining Co., czar of the check

Refinery Expansion

Sinclair to Build Aviation Motor Fuel Alkylation Unit at Houston Refinery

Sinclair Refining Co., manufacturing subsidiary of Consolidated Oil Corp., has authorized installation of facilities for production of 100-octane aviation gasoline at its Houston, Tex., refinery. Construction plans call for work to start as soon as designs can be prepared and arrangements made for priorities on materials.

Announcement of the new plant was made about the time Oil Coordinator Ickes warned that the petroleum industry needed to expand its aviation-gasoline production. In this connection it was recalled that Dr. R. E. Wilson, formerly petroleum consultant to OPM, had been for some time urging a 30 per cent increase in the refining industry's capacity for manufacturing 100-octane gasoline.

Humble Oil & Refining Co. is now constructing a duplicate alkylation unit at its Houston refinery and this plant will be available for operation later this year.

Conferences are being held between representatives of Sinclair Refining Co., refinery construction contractors and equipment suppliers on questions of capacity, type of operation and other preconstruction details. Sinclair now operates an alkylation plant for the production of base stock for 100-octane aviation gasoline at its East Chicago refinery.

Eighteen companies at 23 refineries in the United States now process 100-octane gasoline. Ten other refineries process 87 to 92-octane gasoline. The Army and Navy use 91-octane or above in all but a few of their planes, most of it 100 octane. With new planes being turned out daily at an accelerated pace, besides the increase in civil airline consumption and exports to Britain and Russia, a steadily increasing demand for aviation gasoline has been anticipated.

Refiners say that they are aware of this and that production of aviation gasoline will keep pace, if not ahead, of demand. The only possible problem, they say, is transportation.

Comparatively modest gains in aviation-gasoline stocks during recent weeks indicate that demand is gradually approaching a balance with current production. Stocks of aviation gasoline, including motor fuels with octane rating of 87 or higher, now total approximately 7,700,000 bbl., or about 2,225,000 bbl. more than a year ago.

In the first 5 months of this year, domestic demand for aviation gasoline totaled 3,052,000 bbl., against 2,391,000 bbl. in the same 1940 period. Exports totaled 1,728,000 bbl., against 1,690,000 bbl.

The refining industry currently is producing about 50,000 bbl. of aviation gasoline daily compared to 30,000 bbl. daily a year ago. Decision of the Department of State and Coordinator Ickes to aid the U.S.S.R. in its aviation gasoline needs indicates that export demand from the Pacific Coast will expand substantially over the next few weeks. Aviation gasoline stocks on the Pacific Coast amount to about 1,750,000 bbl., or nearly a quarter of the country's total.

More than 3,500,000 bbl. of the country's aviation motor-fuel reserves are stored in the Gulf Coast refining district which again emphasizes the importance of marine transportation in making petroleum products available at the point of consumption.

Ben Franklin Adding Poly Plant at Ardmore Refinery

A catalytic polymerization plant is under construction at the Ben Franklin Refining Co.'s plant at Ardmore, Okla. The Ben Franklin company, an affiliate of Bell Oil & Gas Co., Tulsa, is incorporating several interesting operating features in the plant which will be in operation this fall. Frick-Reid Supply Co., Tulsa, has the construction contract. The plant is U.O.P.'s Type B unit.

The Ben Franklin plant at Ardmore has crude capacity of 4,500 bbl. daily and has a Dubbs cracking unit capable of handling 2,500 bbl. daily.

Shell to Build Toluene Plant at Wood River Ill.

Construction of a toluene plant at Shell Oil Co.., Inc.'s Wood River, Ill., refinery has been authorized by the management. The projected plant at Wood River will have annual capacity of 4,000,000 gal. of toluene which is the basic ingredient of TNT.

Shell is now operating one toluene plant at Deer Park, Tex., and has another companion plant under construction at that point.

The company announcement of the new Wood River plant said that its completion would bring Shell's toluene output up to 8,000,000 gal. annually, sufficient for 80,000,000 lb. of TNT. The three toluene plants represent an investment by Shell of more than $3,000,000.

Mercury Petroleum Corp. Dismantling Venice Plant

Mercury Petroleum Corp., Venice, Calif., has started dismantling work on its 2,500-bbl. skimming and asphalt plant at Venice. H. H. Biber is president and general manager; J. M. Stump is vice president; D. E. Biber is secretary and treasurer and D. E. Brown is sales manager.

Kendall Purchases Bradford Oil Refining Co. at Auction

The Bradford Oil Refining Co. plant at Foster Brook, Pa., was sold to the Kendall Refining Co. of Bradford for $305,500 at an auction sale at the office of the company, Bradford, Pa., August 8. The only competing bidder against Kendall after the bids passed $250,000 was the Pennzoil Co., of Oil City, Pa., whose highest bid was $305,250.

The interest of the Kendall Co. in the plant it has purchased "is primarily in connection with the development of specialty products from Pennsylvania oil and from the standpoint of light-oil storage," said a Kendall statement, issued by J. B. Fisher, executive vice president. "The amount of employment which will be afforded depends on developments in the specialty field."

The plant was offered for sale by Sterns Marshall, president of the Citizens National Bank and individual trustee for the bondholders who took possession of the plant some time ago.

The first bid was for $25,000, made by J. Riechenbach, Bradford scrap dealer. Other bids included: E. Kent Kane, of Kane, $30,000; United Refining Co., of Warren, $150,000; E. Clarence Miller, of Philadelphia, chairman of the bondholders committee, $125,000; Quaker State Oil Refining Corp., Oil City, $180,000; Alliance Oil Corp., of New York, $245,000.

The sale, which was for cash, included the entire plant, land, buildings, equipment and several miles of pipe line.

Expand Refining Plant

CALGARY, Alta.—Gas and Oil Products, Ltd., headed by A. H. Mayland, is making extensions to its refining plant in South Turner Valley to cost between $150,000 and $200,000. Capacity of the Dubbs cracking unit will be increased from 3,000 to 3,600 bbl. daily, and the first polymerization plant in western Canada will be installed to process a high grade of blending gasoline from vapors usually lost. The blending fluid will be used in place of tetraethyl lead to increase the octane rating of gasoline. The extensions will be completed by the end of 1941.

Natural Gas

Large Gain in Industrial Gas Consumption Sustained

Industrial sales of natural gas in May were 19.7 per cent greater than a year ago. Sales of natural gas reported to the American Gas Association for all purposes in May were 10.6 per cent greater than the same month last year.

Industrial consumption, as indicated by figures on sales of utility companies, increased 15.1 per cent for the first 5 months while the total demand was up 7.3 per cent.

Industrial customers, according to the AGA reports, totaled 42,100 at the end of May, an increase of 5.5 per cent. The modest gain in the number of industrial consumers compared to the gain in volume of gas used indicates a substantially larger increase in consumption per customer.

Total sales of natural gas for all classes of consumption in May were 120,557,700,000 cu. ft., compared to 108,960,000,000 cu. ft. in the same month last year. Five months' sales this year aggregated 727,842,400,000 cu. ft., against 678,209,700,000 cu. ft. in the same 1940 period.

Desulfurization Pilot Plant Being Built in McKamie Field

A pilot plant in which experimental work will be conducted on removal of sulfur from the sour gas produced with distillate in the McKamie field, Lafayette County, Arkansas, is under construction on Carter Oil Co.'s lease in 30-17-23. If experimental work indicates successful commercial application, the company may install a desulfurization plant.

Lion Oil Refining Co. is now constructing a desulfurization plant for processing sour McKamie gas. After removal of sulfur, gas from the Lion plant will be returned to producing zones in the Schuler and Smackover fields for repressuring purposes.

Phenomenal Performance

FOR VERTICAL PUMPS AGAIN ACHIEVED BY POMONA

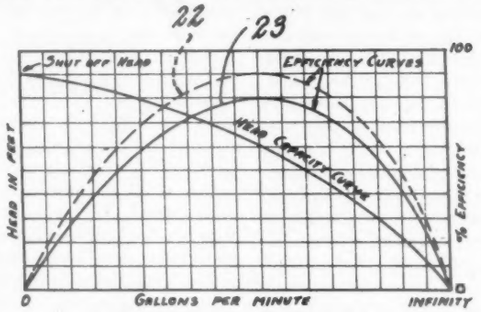
EFFICIENCY INCREASED

AS MUCH AS 10% THROUGH

REVOLUTIONARY DESIGN

Cutaway section of new Pomona pump bowl assembly, showing "bulbous vanes."

Flow pattern of liquids around "bulbous vanes" free from friction and turbulence.



Graph of efficiencies showing difference as between use of "bulbous vane" (22) and conventional knife edged vane (23).

STARTLING discoveries concerning the flow pattern of liquids being handled led engineers of Pomona Pump Co. to the new "bulbous vane" pump bowl and an increase in efficiency of up to 10% over already high standards previously set.

Turbulence and eddy-friction losses are materially lowered, construction is strengthened and life of equipment is prolonged, while a substantial power saving is effected.

If you are interested in the conservation of power costs and have need for increased volume, write your name and address on this page, tear it out and mail to us today for full information concerning this new development.

POMONA
Water-Lubricated
PUMPS

POMONA PUMP CO., 120 Broadway, New York City. Plants at 4301 So. Spring Ave., St. Louis, Mo. and 206 Commercial St., Pomona, California.

Service on Active Fields

REED CITY FIELD, OSCEOLA COUNTY, MICHIGAN

Compiled by The Oil and Gas Journal

Geographic location

In southwestern Osceola County midway between Cadillac and Big Rapids, two of the principal towns in the vicinity. A paved highway runs through Reed City which is about 4 miles southeast of the field. Other towns in the area include Clare and Mount Pleasant, the latter the headquarters for most of the oil companies operating in the territory.

Location of supply houses

Practically all of the major suppliers of materials have stores and stocks in Mount Pleasant and four of them have opened establishments in Reed City and more are planning on following if the development continues. Mount Pleasant has been the principal operating center for development in Central Michigan for a number of years and practically any needed bit of equipment can be obtained there. Stores in the area have started stocking parts for rotary rigs and the best chance of obtaining needed items is in Mount Pleasant.

Trucking and hauling facilities

Several trucking firms have opened up branch offices in Reed City and practically all of the oil-field hauling firms operating in Michigan have offices in Mount Pleasant.

DEVELOPMENT

Early development

The pool was opened with the completion of the Weber 1 Gabel, NE NE SW 31-18n-10w on November 12, 1940. The well flowed approximately 30 bbl. per day from the Monroe limestone at a total depth of 3,620 ft. Due to the severity of Michigan winters, the activity in the area was retarded and did not get under way until spring. The size of the discovery well did not indicate the potentialities of the pool although the Monroe, or the Dundee-Monroe, is one of the best producing horizons in the state.

The second well in the pool, Weber 1 Fatum, SW SW SE 30-18n-10w, was not completed until April 8, 1941, as a small producer in Dundee lime at 3,504-15 ft.; it made between 50 and 60 bbl. initially.

Subsequent development

Pure Oil Co. drilled its 1 Gingrich, SE SE SW 30-18n-10w to the Monroe lime pay, after passing up good saturation in the Dundee lime.

The size of Pure's well encouraged the discoverers of the field to deepen the 1 and 2 Weber and these were completed on June 3, 1941.

Trading and interest in the area began to increase and was heightened further by the completion during the first week in July of the 13,000 bbl. Weber Oil Co. 1 Clark, SW SE NW 30-18n-10w. The estimate of the well's production was based on short gages but the well flowed 75 bbl. per hour for a number of days. Operators did not wish to pinch it in too much for fear of a blowout.

At the end of July there were 10 producing wells completed and there were 15 wells drilling with some of them approaching the pay. More locations are being made every day and more are contemplated.

Production and proration

The field is prorated by the state Conservation Commission and also by the lack of adequate pipe-line outlets. The state has restricted each well to 480 bbl. per day.

Spacing

Spacing in the Reed City field has been established by the state regulatory body at one well for each 20 acres. There were some wells started on 10-acre locations before the state issued its spacing order, and this will make necessary a total of 12 locations on 10 acres to complete the pattern. The leases in the area are large enough to use the 20-acre spacing pattern without any trouble. The tracts are regular, consisting mainly of quarter sections and halves of quarter sections.

PRESENT OWNERS OF PRODUCING WELLS

Company—	No. Wells
Gulf Refining Co.	5
Pure Oil Co.	2
Weber Oil Co.	3

GEOLOGY

Method of discovery

Discovery of the Reed City pool was due to careful subsurface work, the principal data being supplied by dry holes in sections 1, 8, 20 and 35-17n-10w and sections 34, 35-18n-10w. This method has been the most successful yet devised in Michigan as the newer tools of the geologists cannot cope with the local conditions.

General geology of the field

The field is located on an anticline that plunges to the southeast. The north and northwest flanks have not been defined. A gas field in the Michigan Stray gas sand indicates a dome centering around the south half of sections 19 and 20. The pay occurring in limestone in the first 15 ft. of the Dundee is being cased off and will be perforated for exploitation at a later date. The present producing zone is from 25 to 40 ft. below the top of the Monroe in a cavernous dolomite. Traverse lime pay at 2,918 ft. may also be present.

FUTURE DRILLING

The field has not yet been defined by dry holes and at the present time it is impossible to tell how big the productive area is. Estimating the size of a Michigan field is extremely difficult. The pool may eventually embrace four or five sections.

DRILLING CONDITIONS

Drilling conditions are those customarily encountered in Michigan operations and are similar to those found in the Freeman-Redding field. A new drilling practice for Michigan has been introduced at Reed City, the drilling of wells to the pay zone with rotary rigs. There are five portable slim-hole rigs operating in the field at the present time, more than total number of rotary rigs in Michigan on the first of the year.

There is a little over 400 ft. of drift on the surface below which are the Pennsylvanian sands and shales. Practice is to set a short conductor string (30 to 40 ft.) and drill the drift and the Pennsylvanian down to and through the Marshall sandstone where a string of 7-in. o.d. casing is run to protect this brine-bearing formation. The normal Michigan procedure is to standardize at that point and complete the well with cable tools. Where rotaries are used, the drift is cased off with 400 ft. of 10-in. casing and 11-in. hole drilled to around 1,400 ft. and 7⅞-in. or 7¾-in. hole drilled from there to the top of the pay. Pay string run is most commonly 5½-in. pipe. There has been one rotary completion in the field.

Water and fuel

There is ample water in nearby streams for all drilling purposes. While the Reed City structure contains gas in the Michigan Stray, diesel oil, gasoline or butane are used for fuel for the drilling rigs. As development in the field continues there will be ample gas for drilling purposes.

Drilling mud

Mud runs from 9.5 lb. per gallon in the upper hole to 10.5 per gallon at completion. There is some tendency to lose mud around 1,500 ft. and bentonitic material is required at that point. For a

plugging agent Michigan has its own material, beet pulp. Native clays are used for making most of the mud.

Type of bits

Rotary rigs use rock bits entirely. A 12¼-in. bit is used for starting the surface hole and this is reamed with a pilot bit to 15½-in. From four to seven 11-in. bits are used for drilling to 1,400 ft. and 10 to 15 bits of the 7⅞-in. size are used for drilling the balance of the hole.

Drilling time

Rotaries are setting the oil string in approximately 15 days while it takes from 30 to 40 days by the combination rotary-cable-tool method.

Drilling costs

Drilling costs run from $3.00 to $4.00 per foot. Completed wells cost from $18,000 to $23,000.

DRILLING TROUBLES

Operations in the field are not entirely free from drilling difficulties. The mud must be built up to hold the drift in place and it must also be in good condition to drill the Marshall section and the formations immediately underlying. Freezing of drill pipe or casing at that point is the main difficulty. Three rotary holes have been lost above the Marshall sand.

PIPE-LINE OUTLET

Simrall (Standard of Ohio) is laying a line from the field to tie into its system at Temple. Leonard Pipe Line Co., Pure Oil Co. and Simrall now have lines laid to the railroad at Reed City. There is also some oil trucked from the field.

PRODUCING PRACTICES

Gas-oil ratio

Wells flowing at 480 bbl. per day, the rate allowed by the state Conservation Department, make from 500 to 700 cu. ft. of gas per bbl. of oil.

Tubing

The wells are equipped with 2-in. upset tubing for completion and are flowed through a choke at all times.

Tankage

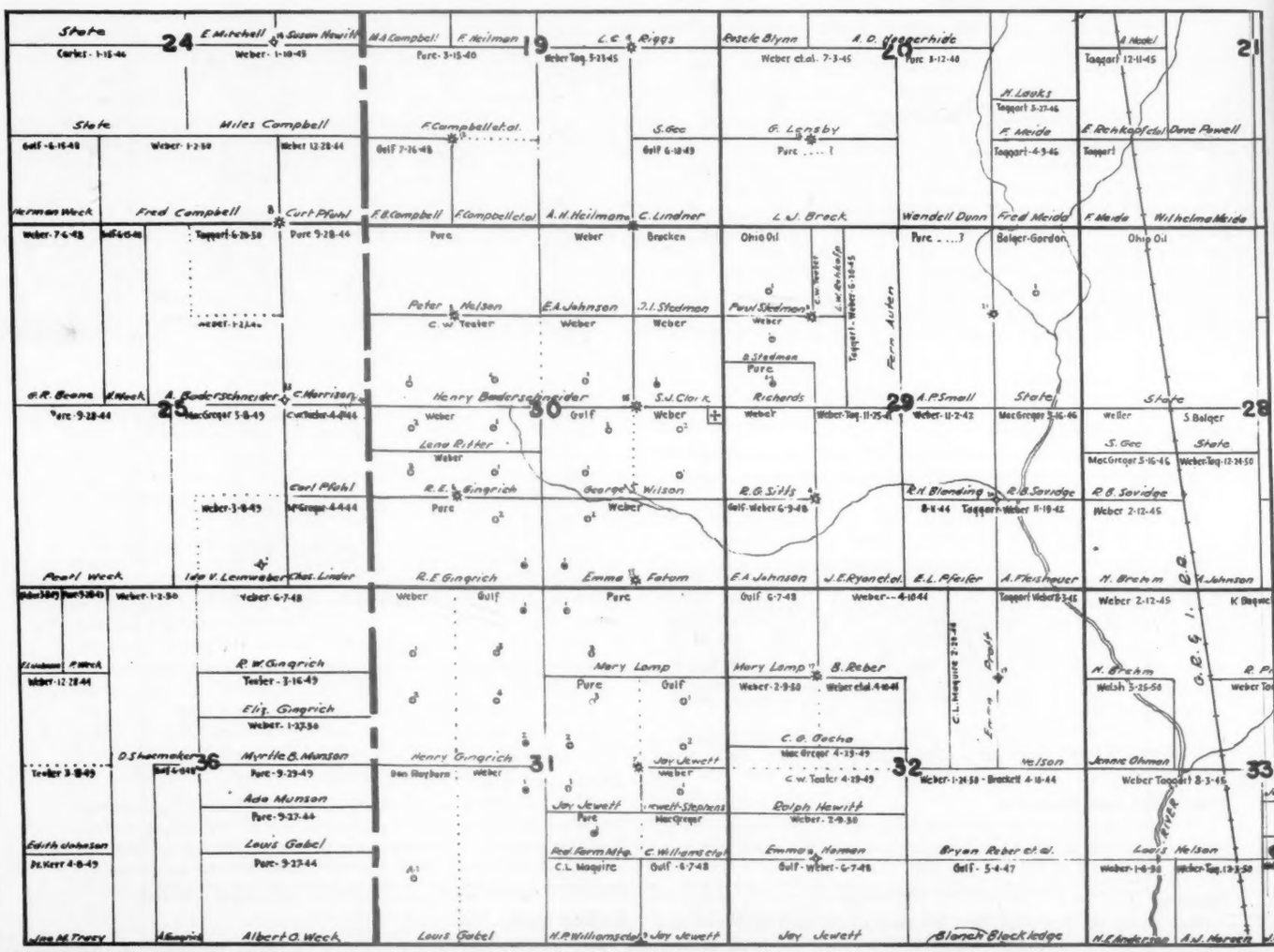
Tank batteries having a capacity from 1,500 to 2,000 bbl. are used. Either welded or vaporproof bolted tanks are being installed.

CRUDE ANALYSIS

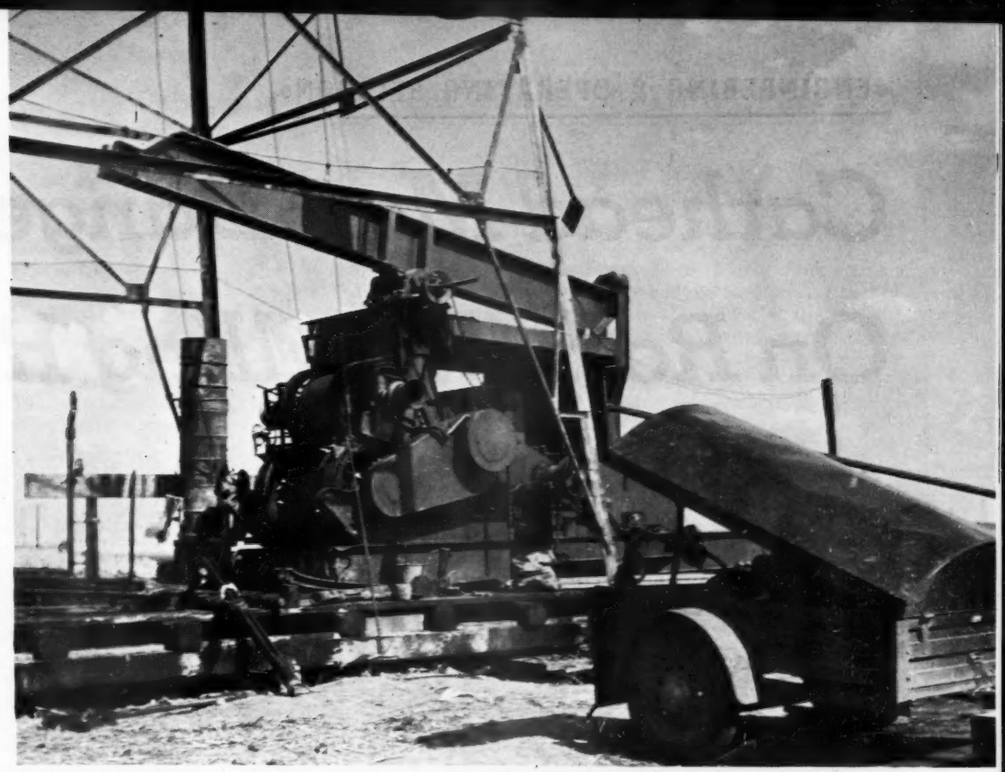
A preliminary analysis of the crude produced from the Monroe limestone at Reed City shows the following:

ANALYSIS

Gravity	45.5	
Color	Green	
Sulfur	0.51	
Motor Gas Dist.	41.1	per cent
Octane No.	34	
Heavy - Bland Dist.	5.5	per cent
Heavy Kerosene Dist.	13.6	per cent
Bottoms	38.5	per cent
Loss	1.3	per cent



Map of Reed City area. Two locations shown on the map have been changed from 20 to 10-acre locations to fill out the spacing pattern started by the first completions. Relocated wells are Weber 2 Wilson, now NW NE SE 30-18n-10w, and the Weber 1 Baderschneider, now SE SW NE of the same section. Map courtesy of Michigan Map Service, Mount Pleasant, Mich.



Potential tests must be run on Kansas wells before they are granted an allowable and recorded as officially completed. On flowing wells the oil produced and the bottom-hole-pressure record taken during the test are used to compute the potential. The photo shows a trailer with an engine-driven wire-line reel for running the bomb

ENGINEERING & OPERATION

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EAST TEXAS MAKES PROGRESS IN HYDRAULIC OIL-WELL PUMPING
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POSSIBILITIES OF FLOODING OLD BURBANK, OKLAHOMA, FIELD
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Cathead Most Dangerous Point On Rotary Drilling Rig

By HARRY F. SIMONS

ABOUT 15 years ago a new man on a rotary drilling crew, a weevil, started to put a rope on a cathead to spin in a joint of pipe and was summarily stopped with the explanation that he was trying to perform the most dangerous task on a rig. A recent publication reveals that, with one exception, injury costs are greater due to accidents at this point than at any other. The number of deaths and serious injuries during the past year due to getting fouled in the cathead has not been tabulated but accidents have been numerous enough to cause comment among men who work in the drilling department.

A technical paper released by the Bureau of Mines, "Accidents in the Oklahoma Petroleum Industry in 1937," by C. F. McCarroll, gives the latest information on the causes and costs of accidental injuries in drilling. This is an extensive analysis of accidents and required several years' work to compile. The fact that it covers a period 3 years ago does not lessen its applicability to present-day operations as it is apparent from recent accident reports that many of the hazards still exist. Where the cathead is concerned, recent records seem to indicate more frequent instead of fewer injuries from this piece of equipment. This may be due to three factors: a familiarity with this hazard which leads to contempt, an influx of new men who have not been forcefully impressed with the danger, and poorer maintenance of equipment caused by a reduced price for the drilling.

This latter condition is becoming more serious as it affects the entire drilling rig and unless the trend is reversed, not only more accidents to workmen but more breakage of machinery and equipment may be expected.

Reduction of the personnel in an effort to cut the corners also increases the danger of accidental injuries as the normal rig is designed for a complement of five men. Eliminating one man makes it necessary for either the driller or the piperacker to assume the duties of the cathead man. When the latter does the catheading the operation is slowed down and if the driller does it he must leave the throttle and brake unattended.

Several recent deaths were due, at least in part, to the fact that the man working at the cathead was also operating the throttle.

How a Cathead Operates

A cathead is simply a spool pressed on and keyed to the end of the line shaft. If differs from other machines in that it is not a positive-drive affair but depends on friction for its operation. The old advertisement of the boy holding the bull by using several wraps of a rope around a tree illustrates one part of the operation of a cathead; rotation of the tree trunk would result in pulling any object toward it. With sufficient coils

Reading counterclockwise, the first two illustrations show the wrong way to handle a spinning line on a cathead. Grasping the rope with the palm of the hand prevents the cathead man from getting his hand in the clear in case the rope fouls. Throwing large loops on the cathead instead of placing small, tight ones leads to fouling of the line. The corner view shows cathead man starting to put the rope on the cathead for spinning in a stand of pipe. Note that right hand supporting the rope has the palm upward. The view below shows the right hand, not needed to guide the rope any longer, being moved to control coils on cathead.

of rope on the cathead a very heavy load can be lifted or pulled on the working end by a very light strain on the operating end.

Both ends of the line move, while the cathead is being used for lifting or pulling some piece of equipment into place or for spinning up the drill-pipe connections while going into the hole; the working end moves onto the cathead as the operating end is pulled away from and off the cathead. If either end of the line fouls, caused by an overlapping of the coils, the cathead ceases to be a machine dependent on friction for its operation and becomes a positive drive.

The rate of winding when fouled is much greater than when the cathead is operating properly. The line shaft and cathead may be running 200 r.p.m. and the rope pulling some object moving only a foot per minute around the cathead. If the rope becomes tangled it begins to move at 760 ft. per minute if a 14-in. cathead is being used. Unless the man running the cathead is prepared for the emergency, he becomes fastened in the cathead by one arm or hand and is jerked from the floor and spun around at 200 r.p.m.

The type of injuries when the man isn't killed are shown in the report mentioned above. Out of 13 accidents on the cathead reported, the injuries included six to the shoulder and arms and seven to the hands and fingers. In these 13 accidents there were four fractures and five amputations.

Causes of Injuries on Catheads

Injuries to cathead men are caused by a combination of circumstances but are due mostly to the worn and unsafe condition of the cathead and the improper operation or poor technique on the part of the drilling crew.

Some state safety departments require that the end of the cathead be sealed to prevent the workman's clothing from becoming entangled. The use of catheads with broken rims is prohibited. Deep grooves on the drawworks side of the spool are not allowed to develop as this increases the chances of overlapping of the coils and the fouling of the rope. The grooves can be eliminated by building up with an electric or acetylene torch and remachining. As this is the point where the rope on the cathead is loaded the heaviest, the friction and wear are the greatest here and the cathead requires repair quite often. The cathead in the accompanying pictures is scheduled for repair as soon as the well the rig is working on is completed.

The most common mistake made by cathead men is the grasping of the rope with the right hand turned palm downward. This places the back of the hand between the rope and the cathead in case it becomes fouled while either placing the rope on the cathead or taking it off. With the palm upward, opening the hand releases the rope and the fingers are removed from danger. Another common fault is the throwing of large loops of rope on the cathead instead of placing tight loops on it.

As the cathead depends on friction for its operation, the faster the line shaft is turned, the greater its power. Cathead men prefer a fairly high speed as the rope is easier to handle although they know that the danger is increased. A moderate speed and an additional coil of rope on the cathead increases the work slightly but it also decreases the danger. The use of too many coils on the cathead, so the weight of the operating end of the rope is sufficient force to pull a fairly heavy object on the working end, is also dangerous.

Laying of the hand on the coils is not dangerous although it may appear to be. This permits the strain on the working end of the rope to be released or reduced while leaving the rope on the cathead.

There have been two recent developments which have reduced the hazards of the cathead substantially. One is an automatic device which shuts off the driving machinery in case the rope fouls.[1] The other makes a winch out of the cathead with the operating end of the rope anchored on the cathead;[2] a friction clutch is used to cause spooling of the line and application of power to the working end of the spinning and jerk line.

Until such devices are widely adopted and others developed, care in operating the cathead, including proper maintenance, moderate speed, proper number of wraps and proper position and movement of the hands will be necessary to prevent serious injuries.

[1] "Adapting Rotary Rigs to Use of Internal-Combustion Engines," by T. P. Sanders, The Oil and Gas Journal, Oct. 17, 1940, p. 73.
[2] "Rotary Rig Cathead Operator Minimizes Drilling Time," by Harry F. Simons, The Oil and Gas Journal, Feb. 15, 1940, p. 66.

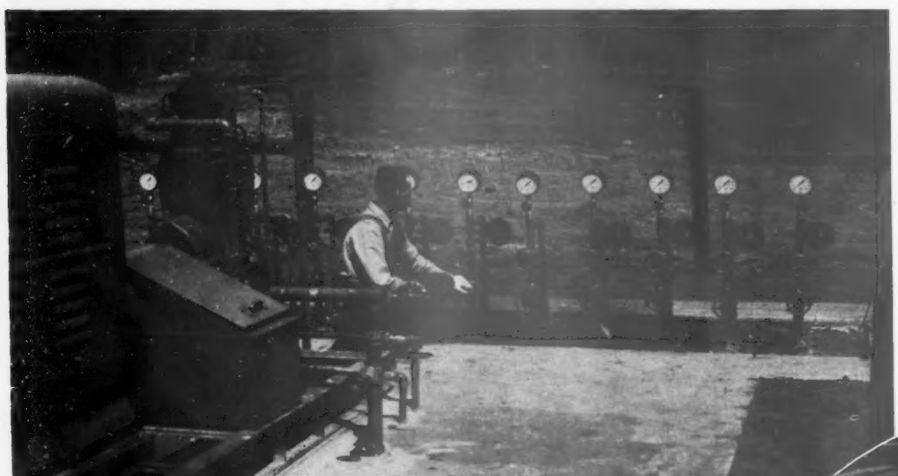
Below: Thumb and forefinger on right hand holds light strain on rope already on cathead as more coils are placed on cathead. In the next view, all the coils of rope are on the cathead and the joint is almost made up. Cathead man uses right hand to put a little slack in line preparatory to final tightening. Next, everything is in shape and a strong pull is applied to the line. Finally, as seen in the top picture, the joint is made up and the rope is being removed from the cathead. Note that during first part of operation, cathead man directs his attention to his end of the rope and the cathead while during the latter he watches the pipe being spun in and the backup man. C. N. Hughes, driller for Fain Drilling Co., posed for the first two pictures, and W. D. Robinson, Fain cathead man, for the remainder.

East Texas Makes Progress in Hydraulic Oil-Well Pumping

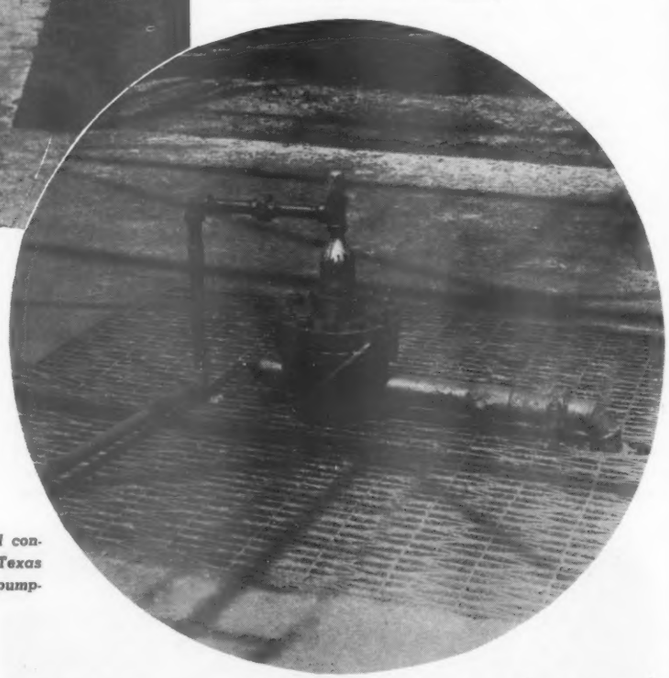
By GEORGE WEBER

PROGRESS in hydraulic oil-well pumping is being watched with interest by operators in the East Texas field. The first hydraulic system has been in operation in the field since May 1939. Its operation and that of subsequently installed units has shown hydraulic pumping to be adaptable to East Texas conditions.

Producing problems encountered in the field, coupled with the growing magnitude of artificial lift, makes East Texas an important proving ground for all types of pumping equipment. Increasing water withdrawals at low well allowables are aggravating the problem from an economic standpoint.



Above: Pumper adjusting strokes per unit on one well at central plant of East Texas multiple hydraulic pumping installation



Right: Typical well-head connections used in East Texas on multiple hydraulic pumping installations

With respect to pumping, East Texas wells are generally classed in two groups. Those on the east side of the field show little or no water, generally high gas-oil ratios and continually decreasing fluid columns. West side wells, on the other hand, produce at high and increasing water-oil ratios, low gas-oil ratios and generally high fluid levels.

Since hydraulic pumping to date has been applied mostly to the west side, the problems peculiar to that area are of primary interest in the current development. Operators are faced with heavy fluid loads in many cases, and in all cases increased loads must be expected. This necessitates either installing heavier units than needed for present lifting requirements in order to provide a margin for the future, or fitting equipment to present needs and replacing or adapting it for greater capacity later. In this respect, hydraulic pumping provides an advantage. Initial investment may be made for present capacity requirements, and added capacity may be incorporated in the system as required, thus postponing investment in large units.

The hydraulic pumping system substitutes hydraulic power transmission for mechanical methods in energizing subsurface well pumps. The subsurface production unit, an engine-driven, double-acting, reciprocating, bottom-hole pump, is connected by a hydraulic power line with the surface power source, consisting of a triplex pump driven by a conventional prime mover. The triplex pump takes suction from the lease tank of clean crude oil, discharging it to the power line. At high pressure the fluid is moved to the production unit or subsurface engine, returning to the surface with the fluid which it has served to lift.*

At this time there are a number of leases in the East Texas field equipped with hydraulic pumping systems. Most of these installations are multiple systems, pumping from 2 to 10 wells each and are generally located along the west side of the field. The existing surface equipment will serve additional wells located on the equipped leases, when such wells cease to flow. When salt water has encroached to the point where added lifting capacity is needed, added surface power units can be incorporated in the systems. In addition, if the load of an individual well becomes so great that it cannot make its oil allowable, its capacity can be increased at nominal cost, by replacing the existing production unit with one of larger capacity.

All systems installed in the field are planned as multiple-well units, serving at present up to 10 wells. One particular surface installation is designed to serve an ultimate total of 14 wells. The limit in the number of wells which can be pumped by a surface unit is determined solely by the total fluid load.

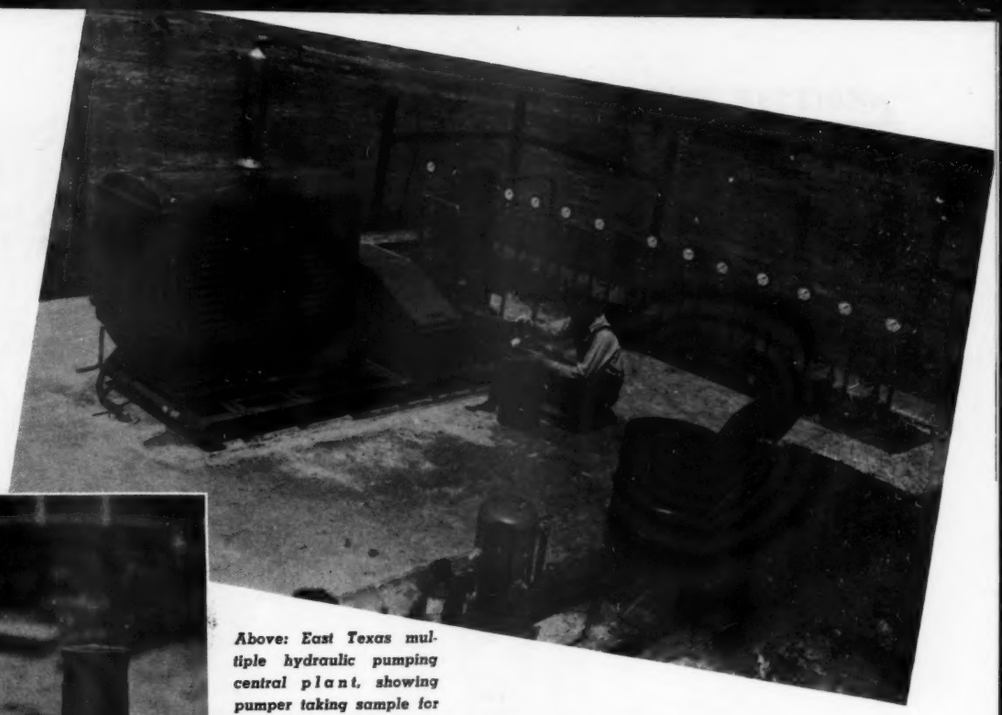
For current operation, all excepting one lease are equipped with 40-hp. gas engines, deriving fuel from the lease gas supply. The triplex pumps now installed have a capacity of 1,200 bbl. of power fluid daily. Since most of the production units are equipped with an engine-pump piston ratio of 1.43 to 1, the total producing capacity of a system of surface units is rated at 1,700 bbl. daily, at 100 per cent efficiency.

The double-acting pump provides large lifting capacity. Thus, daily production of 1,800 bbl. per well can be obtained through 4½-in. casing and 4,000 bbl. per well is possible where wells are equipped with 7-in. casing. These figures assume 100 per cent efficiency. Operations to date in the field show average efficiencies of 95 per cent.

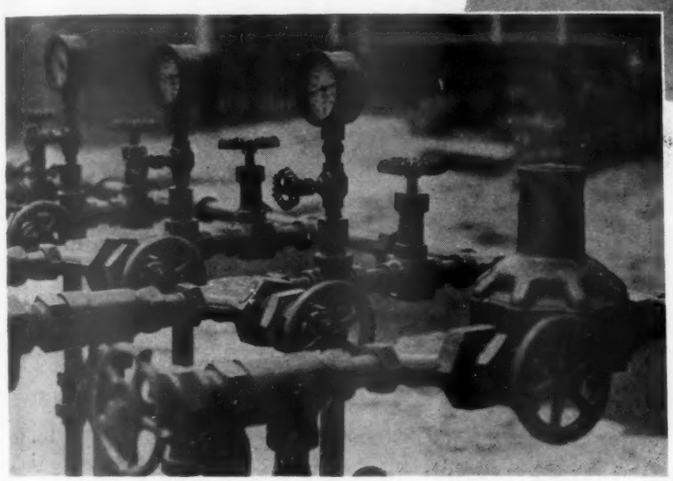
As a rule, the surface unit is located near the lease tank battery. By thus obviating the necessity

*For details of operation and design, see Producing Equipment Directory 1940-41, p. M-5.

for the operator to visit individual wells, much time is saved in pumping a lease. On multiple-well leases, the power oil from the triplex pump is discharged to a header at pressures ranging from 700 to 1,500 lb. per sq. in. Individual power lines to all wells in the system are tied into this header. On some units, each line is equipped with two valves; a block valve for use in shutting down and starting the well pump, and, downstream from the block valve, a metering valve. The metering valve is set to admit power oil to each well in the quantity required to lift its allowable together with salt water in a fixed production period. Such valve settings remain fixed until increased salt-water withdrawals require their resetting. Thus an entire lease can be pumped during a certain period each day. On some leases a small measuring tank is installed to allow the checking of water and oil percentages from individual wells. This periodic check aids in maintaining full allowable production from each well in the system.



Above: East Texas multiple hydraulic pumping central plant, showing pumper taking sample for grindout of power oil



Left: Close up of individual well controls showing gage, gate valve and needle valve. The metering control shown is for testing purposes and can be cut in on any one well as desired

Pump strokes can readily be counted by observing the slight fluctuations of the gage needle on each power line at the surface unit. This allows a constant check on pump performance. Well conditions such as froth, pump-off and erratic pump performance due to possible clogging or binding can be noted at the surface unit, and necessary steps can immediately be taken to correct such conditions with minimum service cost and loss of production. Approximate bottom-hole pressures can also be determined from these manifold gages.

Tubing Used as Power Lines

The production units in East Texas are set low in the well, considerably below the top of the fluid level in most cases. Instead of employing the usual small power line inside the tubing, the units in East Texas are run on the regular well tubing above a production type packer set in the casing. This represents a saving in macaroni tubing for power transmission, and provides for greater future capacity. Power oil moves to the production unit through the tubing and well production is lifted to the surface through the annular space between tubing and casing. Pumps so run are equipped with a "J" tool at the bottom, so that they can be pulled with or without the packer.

On two particular leases, now installed with hydraulic units, are illustrated some of the problems facing East Texas operators. The original installation on one lease included a production unit made with standard materials adaptable to 90 per cent of conditions encountered in field operation. However, during the shut-down periods, the water in the bottom of the hole deposited a thin, hard coating of lime in the pump, causing erratic operation and eventual binding. The unit was pulled and a study was made of the parts affected. A change of materials to a type of stainless steel corrected the condition and no trouble from that source has since been encountered.

Another lease, equipped with conventional equipment, located in a "hot spot," had caused considerable trouble from corrosion. Examination of subsurface equipment indicated that the cause was electrolysis, and tests revealed a potential of 0.88 volt across the lead line to one well. Of the six wells on the lease, the two showing the worst corrosion were chosen for hydraulic pumping. The former rod pumps had been set high in the well and it was found that the corrosion had occurred below the top of the pump, attacking valve parts and tubing joints. On one well the regular type of unit was run, using tubing as a power string. The pump seat and the top of the pump were electrically insulated, as were the power line to the well, the lead line from the well and the tubing in the hole. Since its installation in April of this year, the unit has shown no corrosion.

The second well was equipped with an insert type pump, run in the tubing and employing a macaroni string for power transmission. Trial introduction of caustic into the well between the tubing and casing resulted in formation of lime in the pump, so such treatment was abandoned. However, since spring the unit has shown no corrosion. Subsequent examination and study of these two units may reveal important means for dealing with difficult corrosion problems in the field.

Clean power oil is the secret of trouble-free hydraulic pumping. This is easily and simply accomplished by the use of settling tanks. Sufficient tankage should be set to allow 24 hours settling of power oil. In East Texas such settling has been found ample to insure grindouts consistently below 0.01 per cent.

Operating Costs

To date, hydraulic pumping systems in East Texas have given favorable operating performance. Operating costs on subsurface units depend on the prevalence of pulling and servicing the pumps. It has been estimated, from records of all hydraulic units now in operation, that pulling jobs may be necessary in East Texas on the average of every 12 to 18 months. This is true for operation to date, and in some cases production units have been in operation for more than 18 months without pulling.

Surface operating costs are relatively low. Multi-cylinder engines adapted for burning gas have proved the most economical type of installation to date. The hydraulic system makes an ideal load for such prime movers, since it remains steady and perfectly balanced. The absence of power peaks and racing requires less horsepower per barrel of fluid lifted, and thus lower fuel costs. One lease with three wells producing 80-90 per cent of salt water is making allowable with a 10-hp. prime mover. Servicing costs of the triplex pump will consist of replacement or repair of plungers at about 2 to 3-year intervals. The average lease is equipped with small-capacity triplex pumps, which may be complemented at nominal cost with additional units as water production increases.

Treating Conditions

On leases making large percentages of salt water, the oil used for power transmission may be passed many times through the power cycle before being withdrawn from the lease. Each time the power oil reaches the surface with new oil and water it is passed through the treater. Less treating compound is found necessary in such cases, and since large flow rates are maintained, the temperature of the fluid at the surface is higher, requiring less heating in the treating units. Some operators of high water-oil ratio wells propose to place a water knockout ahead of the treater, preventing overload and facilitating the handling of greater volumes of water with present equipment.

The hydraulic pumping systems installed in East Texas have been closely observed for performance, installation and operating costs. They combine advantages in flexibility, balance and centralized operation. If subsurface pump performance, elimination of deposits and pump binding, resulting in pulling, can be continued at a minimum, operating costs of hydraulic pumping units will favor their increased adoption in the field.

Recently completed Polymerization unit of an eastern refiner of high octane motor fuel —employing a large number of **Reading-Pratt & Cady Valves** —1500 lb., 900 lb. and 600 lb. Cast Carbon Molybdenum Steel Globe Valves, 300 lb. Cast Carbon Steel Gate Valves, etc.

Another "Poly" Plant installs READING-PRATT & CADY VALVES

This refiner has been Nationally recognized since the early days of the industry as a conservative organization—given to the refining of first line products.

Naturally, then, READING-PRATT & CADY was gratified when refinery engineers and engineers responsible for the design and construction of this new Polymerization unit decided to use READING-PRATT & CADY Valves.

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Fig. 15011 Cast Carbon Molybdenum Steel Globe Valve with Stainless Steel Trim. Primary rating: 1500 lbs. at 900° F. . . . Also available with screwed ends, screwed ends with By-Pass, flanged ends with By-Pass. Welding ends and Welding ends with By-Pass.

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Safety Standards of Liquefied-Petroleum-Gas Industry

By G. L. BRENNAN
Philgas Division, Phillips Petroleum Co.

SOME of the greatest hazards against which man must protect himself are the processes and products which have been developed to serve him. Nearly every time a new and useful chemical product is developed we must learn its characteristics to prevent mishandling and subsequent accidents. Liquefied petroleum gas is an example. Controlled and properly handled, it is a convenient and safe fuel. But, because of the very qualities which make it valuable, volatility and concentrated energy, it presents a potential hazard if every step in its handling is not properly conducted. The properties of these products have been given thorough study by the industry, by insurance experts and by governmental regulatory bodies, with the result that we have a set of safety standards worthy of the wholehearted support of every company and individual connected with this comparatively young and growing business.

Much data have been published on the size, scope and growth of the liquefied-petroleum-gas (L.P.G.) industry and a brief review of some of this information may be of interest.

Fig. 1 shows the relative volumes of propane and butane marketed by the industry since 1928 and classifies their fields of utilization. Prevention of accidents during this service is largely a problem of confining these products in suitable containers and supplying suitable controls and piping to safe appliances.

Of further importance is the relative vapor pressure which determines the design and working pressure of the containers, the type of valves, relief devices, connections, hoses, piping and other appurtenances. Other properties such as the boiling point, specific gravity, dew point of the gas, thermal value and liquid expansion-correction factors affect the design of heat exchangers, regulators, gas burners, piping layouts, etc., and affect operating procedures.

Safety Standards

Fig. 2 is a flow sheet illustrating how the principal work of preparing L.P.G. safety standards is carried on. At the top are shown the various working bodies in the L.P.G. industry, a majority of whom are members of the Liquefied Petroleum Gas Association (L.P.G.A.) or its affiliate, the Compressed Gas Manufacturers Association (C.G.M.A.). The standards committee of the L.P.G.A., consisting of the best talent of the industry, is a clearing house for data, including information on accidents, operating methods, new economic conditions and problems affecting safety. It is the duty of this committee to suggest additions, modifications or clarification of the standards. The results of its work are then submitted to the National Fire Protection Association (N.F.P.A.) which, through its committee on gases prepares the final draft which with approval of the N.F.P.A. is then recommended to the National Board of Fire Underwriters (N.B.F.U.) for adoption and publication.

This method of forming standards, although appearing cumbersome, is unusually fair and gives an opportunity to the industry, to insurance interests and to various regulatory bodies for submitting criticisms and suggestions. It is truly an American method.

The N.B.F.U. standards have been generally adopted by the majority of concerns engaged in marketing L.P.G. although it is regretable that a few have done so with obvious reservation. A large number of states have adopted these standards so that they have the force of law. Standards and regulations pertaining to the transportation of butane and propane in interstate commerce are established by the Interstate Commerce Commission (I.C.C.) and are binding by law upon shippers and carriers alike. The I.C.C. depends upon other organizations for technical information required for such regulations and here again the industry and others involved have an opportunity of assisting in these problems as may be seen in Fig. 2. The L.P.G.A., C.G.M.A., Association of American Railroads (A.A.R.) and others are consulted and the results correlated into workable form by the Bureau of Explosives of the A.A.R. if railroad operations are involved, or through the I.C.C. Bureau of Motor Carriers on highway operations. Final results are then published by I.C.C.

Following are the publications that should be in the hands of every company engaged in any part of this business:

Freight Tariff No. 4—I.C.C. Regulations.—W. S. Topping, agent (replaces Bureau of Explosives Pamphlet 9)—These are the revised I.C.C. rules covering rail shipments of hazardous commodities, copies of which can be obtained from Bureau of Explosives, 30 Vesey Street, New York.

Motor Carrier Tariff No. 5—I.C.C. Motor Carrier Safety Regulations—W. S. Topping, agent. This contains I.C.C. rules and regulations governing the transportation of explosives and other dangerous articles by common carriers and contract carriers by motor vehicle, copies of which can be obtained from Bureau of Explosives, 30 Vesey Street, New York.

Pamphlet 58—N.B.F.U.—August 1940 Edition—This contains the safety standards that are most widely applicable to L.P.G. distribution, storage and utilization.

States also play an important part in the enforcement of safety laws. Those which have

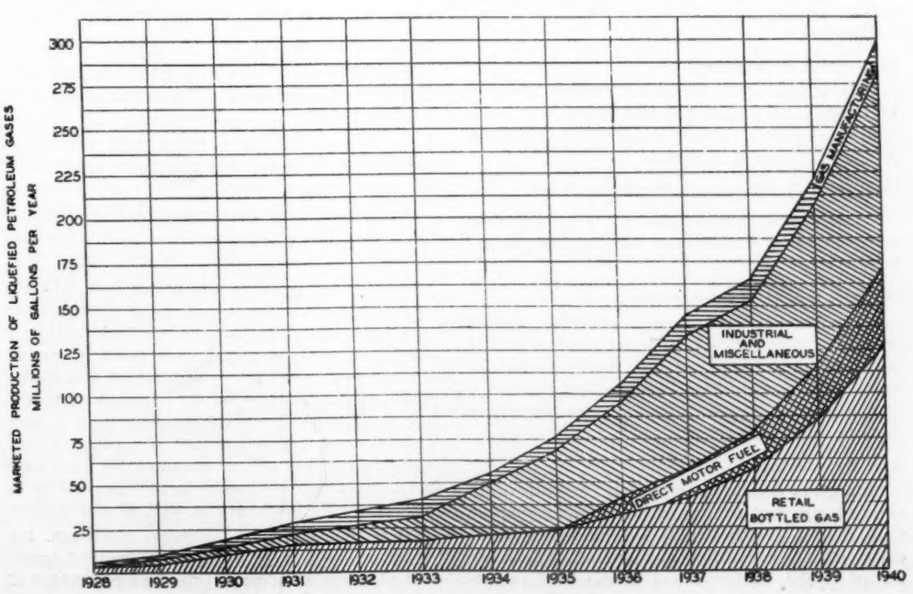
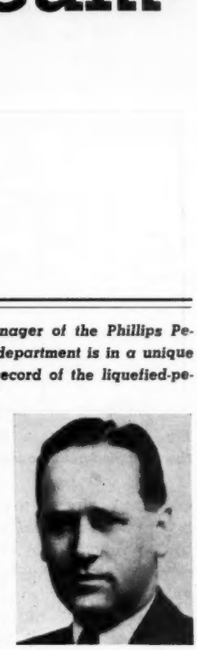


Fig. 1—Growth of liquefied-petroleum-gas industry since 1928



G. L. Brennan, assistant manager of the Phillips Petroleum Co.'s special products department is in a unique position to present the safety record of the liquefied-petroleum-gas industry and to suggest to manufacturers and users of the products ways and means to maintain that fine record.

Graduating in mining engineering from the University of North Dakota in 1919 he had experience in the engineering and sales branches of the coal and refractory industries before joining Phillips. Since joining that company he has been sales manager for the liquefied gas division supplying public utilities, manager of wholesale sales, and assistant manager of the Philgas division before these activities were merged with others under the newly created special products department.

adopted part or all of these standards are listed below (states and enforcing authority):

Alabama: Railroad Commission.
California: Department of Industrial Relations.
Kansas: State Fire Marshall.
Kentucky: Division of Insurance.
Louisiana: Public Service Commission.
Mississippi: Motor Vehicle Commission.
New Mexico: Department of Public Health.
Oklahoma: Corporation Commission.
South Dakota: State Fire Marshall.
Tennessee: State Fire Marshall.
Texas: Railroad Commission.
Arkansas: Department of Labor.

States with legislation proposed on L.P.G. safety standards are:

Colorado: State Oil Inspector.
Iowa: State Fire Marshall.
Michigan: State Fire Marshall.
Minnesota: State Fire Marshall.
Nebraska: State Fire Marshall.
Wisconsin: Industrial Commission.
Missouri: State Oil Inspector.

N.B.F.U. Pamphlet 58, mentioned above, is composed of one section of basic rules and four divisions giving specific rules applicable to the various types of systems or installations under each classification. These standards are not applicable to marine terminals, natural-gasoline plants, refineries, tank farms, etc. A few of the basic rules are worthy of comment.

Odorization of Gases.

Butane and propane from natural-gasoline sources, as well as from some refinery sources, are odorless and it is highly important in the interest of safety that a suitable odorant be added. Common practice is to add the odorant at the point of shipment and generally no exception is made with refinery products: odorant is also added to them.

Examination and Listing of Equipment and Systems.

This rule provides for the testing and listing of equipment and systems by a competent recognized laboratory or by the enforcing authority itself (such as the Railroad Commission in Texas). Underwriters' Laboratories, Inc., have performed a large amount of work of this kind at the same time rendering constructive and helpful criticism of designs and construction. It is strongly recommended that concerns engaged in this business submit equipment and systems to Underwriters' Laboratories.

Construction of Containers.

This requires all containers, except those of I.C.C. specifications, to be constructed, with a few minor exceptions, in compliance with the A.S.M.E. or the A.P.I.-A.S.M.E. codes.

Location of Containers and Regulating Valves.

Safe distances between containers and buildings or surrounding property are set forth in this section.

Container Valves and Accessories.

These are specifications as to materials, method of installation, etc., with special mention of excess flow valves, safety devices which have been found of unusual value in preventing the escape of container contents when exterior connections have been broken off.

Hose Specifications.

This gives details on materials, working pressure, fittings and testing with a recommendation that in transferring liquids, only a wet hose be used. This means that a valve should be attached to the discharge end of the hose to prevent the loss of contents when disconnecting. Dry hoses have been the cause of several accidents.

Safety Devices.

In the preceding paragraphs, these basic standards cover construction details required to prevent the accidental escape of gas. In the event excessive pressures are developed by rapidly increasing temperatures, it is necessary to provide an automatic release of this pressure through suitable relief valves. Certain features of these relief-valve requirements are worth mentioning. For example, the minimum setting cannot be less than the working pressure of an A.S.M.E.

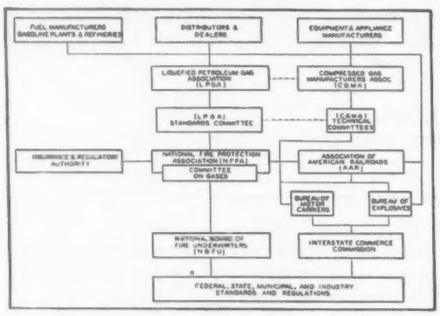

FUEL MANUFACTURERS GASOLINE PLANTS & REFINERIES
DISTRIBUTORS & DEALERS
EQUIPMENT & APPLIANCE MANUFACTURERS
LIQUEFIED PETROLEUM GAS ASSOCIATION (L.P.G.A.)
COMPRESSED GAS MANUFACTURERS ASSOC. (C.G.M.A.)
(L.P.G.A.) STANDARDS COMMITTEE
(C.G.M.A.) TECHNICAL COMMITTEES
INSURANCE & REGULATORY AUTHORITY
NATIONAL FIRE PROTECTION ASSOCIATION (N.F.P.A.) COMMITTEE ON GASES
ASSOCIATION OF AMERICAN RAILROADS (A.A.R.)
BUREAU OF MOTOR CARRIERS
BUREAU OF EXPLOSIVES
NATIONAL BOARD OF FIRE UNDERWRITERS (N.B.F.U.)
INTERSTATE COMMERCE COMMISSION
FEDERAL, STATE, MUNICIPAL, AND INDUSTRY STANDARDS AND REGULATIONS

Fig. 2—Procedure in developing safety standards in the liquefied-petroleum-gas industry

code tank, since a premature escape of gas would be hazardous. Relief valves must connect directly to the vapor space of the container so that self-refrigeration of the liquid takes place if the valves open. Proper venting of the relief-valve discharge away from the container and preferably upward is important. Several tank failures have occurred because return bends on relief-valve outlets directed burning gas on the container itself causing overheating and failure of the shell. Many tank-truck fabricators have been negligent in this requirement.

Filling Densities.

Since butane and propane have relatively high coefficients of thermal expansion, it is essential to provide outage space above the liquid in each container. The table of filling densities shown should be in the hands of all employes whose duties involve loading of tank cars, tank trucks or cylinders. (Aboveground column applies to trucks, cylinders and tanks. Underground column applies to tank cars and to buried tanks.)

Transfer of Liquids.

Improper methods of transfer have caused many accidents. Among some of the causes of accidents are the following:

(*a*) Filling without a pump and venting of vapor from receiving tank to atmosphere with resulting accident or fire.

(*b*) Use of a dry hose with contents vented at the wrong time and place—a wet hose is the only answer.

(*c*) Transferring the wrong product into the wrong tank—in other words, putting propane or high vapor-pressure mixtures in a tank built only for butane causing popping of relief valves or other damage. There are no summer and winter grades of L.P.G. in so far as containers are concerned. The design working pressure of a tank limits the vapor pressure of the product it may contain regardless of the season of the year. This fact is too often overlooked in certain sections of the country by producers as well as distributors.

(*d*) Overfilling due to careless workmen, improper or faulty gaging devices or general ignorance of outage requirements and no realization of the forces developed by hydrostatic pressure.

(*e*) Careless use of open flames, improper electrical equipment and even smoking around or near where filling operations are conducted.

We believe all will recognize the importance of accident prevention and its influence for good upon this industry. Elimination of property damage, elimination of loss of life, and maintenance of uninterrupted service, are all necessary to a successful future. Thus far the industry has enjoyed an enviable safety record as a result of many years of intensive study of product properties, methods of handling and suitable equipment. Most of this work and study has been used in preparing the present standards.

What can manufacturers of these fuels do to help the safety program of the liquefied-petroleum-gas industry? We believe the following comments are deserving of serious consideration:

Accidents adversely affect the future of liquefied-petroleum-gas industry.

Only products of high quality and of uniform specifications should be offered.

Each participant in the business should inspect periodically his storage, handling, and loading-rack facilities. Also see that tank cars are maintained in good condition particularly as to valves and gaging equipment which must be manipulated by the consignee. This will avoid loss and hazard in transit and at the receiving point.

All employes whose duties involve loading of tank cars, tank trucks, and cylinders should be made acquainted with federal and state rules and regulations on the subject.

A qualified man should devote the necessary time to safety so that he may advise on equipment and operations.

Caution should be followed in furnishing products to concerns which fail to use safe transportation, storage and utilization equipment. This should be practical to the extent of turning down business in order to assist in enforcing safe practices.

Cooperation among the various government agencies, and with the various industry, insurance and regulatory associations and authorities on safety problems.

The liquefied-petroleum-gas industry has had a most excellent safety record considering the large volumes manufactured, transported and marketed. This is primarily due to the time and money that has been wisely spent by the leaders of the industry in promoting safe equipment and safe operating practices and in helping to promulgate safety standards and regulations. It is the earnest desire of the industry to improve upon this fine record in the future.

●

Rotary Drill for Boring Pipe-Line Road Crossings

Is it possible to use the rotary drilling methods in boring road crossings? The common practice is to bore under highways and railroads by jabbing or turning an augur through the ground. Lately, engine-driven units are employed which are commercially made for this purpose or which are built by construction organizations. In some cases the cutting is done dry, with the augur removed from the hole for emptying after it has been filled with cuttings. Another type of equipment has been developed which provides for washing out the cuttings continuously with a stream of water.

Principles of rotary drilling used in drilling oil wells can easily be adapted to this job as an ordinary core drill laid on its side could drill a hole of almost any desired length. Most of the machinery, with the exception of the rotary table, could be kept on the ground outside of the ditch.

Panorama of the Guthrie field, Logan County, Oklahoma, the state's outstanding discovery in the first half of 1941

Repressuring Plan Studied By Guthrie Field Operators

By HARRY F. SIMONS

Desire of Guthrie field, Oklahoma, operators to make maximum use of energy inherent to the reservoir has caused them to consider the economics of instituting a repressuring program.

The field, Oklahoma's outstanding discovery in the first part of this year, gives indications of being a gas-control reservoir, making fullest possible use of the natural force a desirable practice.

Gasoline content of the gas produced with crude at Guthrie is sufficient to justify the repressuring project if other factors are commensurate.

THE Guthrie field in Township 17n-1w, Logan County, Oklahoma's outstanding discovery of 1941, will be repressured as soon as contract arrangements between operators and plant design are completed. Completion of a study of the conditions in the field indicated that such a project would be economically feasible. Operators in the field, which is owned principally by Continental Oil Co., Sunray Oil Co., Sinclair Prairie Oil Co., W. C. McBride, Inc., and Fain Drilling Co. are concerned with utilizing the energy in the reservoir to its fullest extent. A preliminary meeting of the operators was held last week.

At present, the Guthrie field covers more than 200 acres, productive in the second Wilcox sand at approximately 5,450 ft. The pay section is approximately 40 ft. thick and the wells have been completed for initial production ranging between 1,500 and 2,500 bbl. per day. There are 15 completed wells in the field with 8 drilling or in the process of completion. The pool is not definitely outlined but chances for its expansion are limited, except to the southeast and northwest.

The field was discovered last February with the completion of the Sunray-Fain-Continental 1 Donoghue, NW SE 1-17n-1w, which made 2,444 bbl. per day on potential test from the second Wilcox sand at 5,425-45 ft. This well was started by E. W. Hamilton et al in conjunction with Fain Drilling Co. and Sunray Oil Co. Before the well was completed Continental Oil Co. bought the quarter interest belonging to Mr. Hamilton. Continental had a spread of leases in the vicinity and was a supporter of the exploration.

Dry Hole on South End

The field is limited on the south end by a dry hole in 13-17n-1w and on the east by a well in 8-17-1 which failed to find production in the Wilcox but had prospects in the Bartlesville sand. The exact extent of the field will not be known for several months.

Possible lack of a water drive in the field has made the operators anxious to conserve the reservoir energy as much as possible. Producing wells have not encountered water but T. N. Berry 1 Howland, SW SW NW 8-17n-1w, was drilled to a total depth of 4,536 ft. and is reported to have made only 2 bbl. per hour on test at that depth which was approximately 42 ft. in the second Wilcox sand. This well is approximately 29 ft. lower on the top of the second Wilcox than the discovery well.

There are strong indications that Guthrie is a gas-control field. Conservation of the gas is important as the field has a low gas-oil ratio of about 500 ft. of gas per barrel of oil.

Paucity of gas led operators in the field to voluntarily reduce the withdrawal before the last market-demand hearing at Oklahoma City from 200 to 150 bbl. per well daily. The field has ample market for more than 400 bbl. per well per day as two pipe lines, Continental and Empire, are running oil from the pool to refineries at Ponca City, Okla. Withdrawal from the field was voluntarily and successively reduced from 400 bbl. in June to 300 bbl. on. July 1, 200 bbl. on July 17, and 150 bbl. on August 1. This was necessary to prevent an increase in the gas-oil ratio or a too rapid decrease in bottom-hole pressure.

All of the wells in the field are being produced through small chokes, about ¼ in. Gas produced in the field is not enough to warrant laying lines to supply fuel to drilling wells. Fuel for drilling operations consists of either butane or diesel oil.

Unfortunately, the field has been on production for such a short time that there is not enough information available for accurate determination of the field's optimum rate of flow. Gas-oil-ratio tests have been run on most wells and some bottom-hole-pressure data have been obtained and engineering work will be expanded shortly. The original bottom-hole pressure, shown by a test in an early completion, was 2,200 lb. per sq. in. Decision to cut the production from the field has been based on production information rather than on bottom-hole-pressure data which was reported declining at about 150 lb. per sq. in. per month.

Complete core-analysis data on the pool are also lacking. A portion of the pay zone in the discovery well showed from 0 to 65-md. permeability with an average of 21 md. Porosity varied from 8 to 10.3 per cent with an average of 8.85 per cent and oil saturation varying from 12.6 to 23.3 per cent with an average of 16.97 per cent. Gravity of the oil shown by the core analysis was over 42° while the gravity of the produced oil has been found to be 43.6° at 60° F.

Profitable Operation Assured

Gasoline content of the gas, while not outstanding, is at least considered good, being about 1.08 gal. per 1,000 cu. ft. A combination gasoline recovery-repressuring project can operate profitably on such gas providing volume is sufficient.

The principal problem is the gas volume in the field, the oil production at present being accompanied by less than 1,500,000 cu. ft. of gas daily. Under a repressuring or a pressure-maintenance program, withdrawal from the field would be further restricted and even less gas would be available. There is also no source of inexpensive gas for injection purposes in the vicinity. This will make it essential that the maximum benefit be obtained from all the gas used.

Along with the other problems involved, an interesting procedure is being considered. This is the alternate injection of gas in different wells instead of having a few wells devoted exclusively to intake purposes. Normally, the latter procedure is followed with a few producing wells in a pool being converted to input wells.

Operating Ideas

Dog House on Wheels

Slightly reminiscent of the old chuck wagon is this dog house on wheels used by a contractor in a Texas field. The wagon also carries the light plant. The wheels are made with automobile bearings and can be easily pulled over dirt roads. Principal reason for this is that the dog house is used with a truck-mounted rig used for work-over jobs. At moving time the dog house is simply hooked on the drilling truck.

Extension Handle on Vent Valve

Gravity conservation is one of the main problems of many oil companies. They have learned that vapors escaping from tanks cost them thousands of dollars annually. This has led to the modernization of many tank batteries with vaporproof hatches and venting systems which maintain a 2 to 4-oz.-per-sq.-in. pressure at all times. Unless gasproof gage and thief hatches are provided, some means must be provided for shutting off the tank being thiefed or gaged from the remainder of the venting system. One company has the arrangement as pictured, for closing the vent valve as the hatch is opened.

Backside Arrangement for Moving Oil to Pipe Line

The moving of oil from one-well leases to pipe lines presents a problem as the operator cannot afford any great investment in a pump or the cost of running it. The arrangement shown is used by one Texas oil producer on a small lease. It consists of a backside pumping attachment on the unit, a stroke post and a double-acting pump. Two tanks are used on the lease so the production and shipping of the oil can continue without interruption.

Brace Holds Sand Pump Over Dump Box

Metal dump boxes made from 12-in. casing are becoming standard equipment on cable-tool and clean-out rigs. One crew has gone a step further and has included a bracket for holding the bailer or sand pump over the mouth of the box. This is particularly handy when using a sand pump as it must be opened with a wrench each time it is pulled from the hole. The bracket is made from a sucker rod and slips into collars welded on the side of the large casing.

HOT OFF THE DESERT
—this UNVARNISHED truck engine record

7.45% of resin is scientifically reported in one heavy duty truck that was strictly, impartially tested in desert heat against an identical unit that came out with 6.63% of resin ...while the third identical unit in this controlled desert test is on the record with startling freedom from resin—*only 0.91%!*

There were good nationally known motor oils—above medium price—in the first two engines, and the almost unvarnished one contained recently introduced Conoco N*th* motor oil. There is even a whole lot more that favors Conoco N*th* and your cost records, judging by many other data from the same test. Here are your figures... strictly comparable...

	CONOCO N*th* OIL	SECOND OIL	THIRD OIL
% Resin	0.91	6.63	7.45
% Sludge	0.10	0.175	0.217
Comp. Ring Gap Increase	0.0048	0.0054	0.0056
Miles per Gal. Gas	9.85	9.60	9.42
Miles per Qt. Oil	2,460	2,292	2,146

You know that fuel economy as well as oil economy is most consistent with free rings, free-working valve mechanism of any type, freedom from wear, and freedom from deposits in the oil and on the working surfaces. On these counts, among others, Conoco N*th* oil has given evidence that it will perform economically in your own most critical tests, because Conoco N*th* succeeds against oxidation—varnish—sludge—with its new *Thialkene inhibitor**. The proof is that the two competitive oils in the hot desert test thickened—*but not Conoco Nth*. Give it a run for the sake of your money. Continental Oil Company —*Pioneers in Bettering America's oil with Synthetics*

*For detailed scientific explanation see *Journal of Industrial and Engineering Chemistry*, for March, 1941; Page 339

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Preliminary Examination of the Possibilities of Flooding Old Burbank, Oklahoma, Field

By ROY L. GINTER
Ginter Chemical Laboratory

IN studying the possibilities for increasing production in the old Burbank field, Oklahoma, by water-flooding methods, data has been procured and calculations have been made which are of significance at this time when consideration is being given to applying this secondary method in Oklahoma to deeper horizons than are exploited in the Nowata area. For the last 5 years, water flooding in Oklahoma has been largely concentrated in the Nowata field of Nowata and Rogers counties in the northeastern part of the state, where oil has been produced for 35 years from a sand body at depths between 450 and 550 ft. In looking for areas where water flooding may be profitably applied, the opportunity for applying this method in the old Burbank field has been examined. The old Burbank field which is about 60 miles northwest of Nowata was opened for development in 1922 and produces from depths of approximately 2,700 ft. Results of studying this field to determine what can be accomplished by water flooding are presented in this article.

An estimate of the original reserve in place in the old Burbank field was made on the basis of 20 per cent porosity, 80 per cent saturation and 40 ft. of pay. It is assumed that 20 per cent of the pore space was filled with formational water and that the gas produced was in solution with the oil in place. This estimate indicates:

Total reserve in place	49,600 bbl. per acre
Total production as of January 1, 1940	9,000 bbl. per acre

In order to arrive at the volume of this 9,000 bbl. in the sand body, a 25 per cent shrinkage factor is used. Thus the 9,000 bbl. produced represents 12,000 bbl. in place and the residual reserve becomes 49,600 minus 12,000 bbl. or 37,600 bbl. per acre. The estimated water-flood recovery at 40 per cent is 15,040 bbl. per acre or 2,406,400 bbl. for a quarter section.

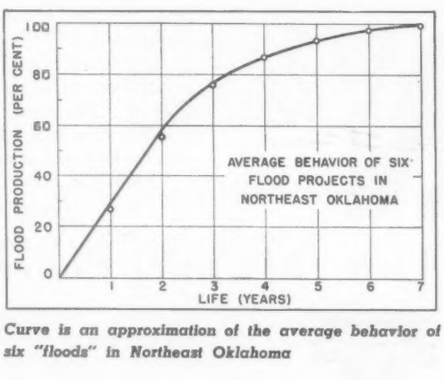
The plan proposed for water flooding Burbank properties is based on a quarter-section development and calls for the drilling of 25 water input wells with four wells at the corners of each 10-acre, five-spot wattern. There will be 16 line wells and 9 inside wells. The old wells located in the center of each 10 acres will be equipped with new heavy-duty pumping equipment and will serve as producers.

Division of Cost

In some cases it is equitable for the adjoining property owners to pay half the cost of the line well drilling. Relative to the rate at which the Burbank sand may be expected to take water, a few facts on a successful Nowata flood are cited for comparison. On this property a 2½-acre, five-spot pattern has been used for a quarter section. The average pay is 30 ft. of sand and the permeability ranges from 30 to 60 millidarcys. In 1938 the water input per well was a little over 100 bbl. of water per well per day and the total pressure on the sand ranged from 700 to 750 lb. (hydrostatic head plus pump pressure.) After water had been injected into this property for 3 years, it produced approximately 6,000 bbl. of crude per acre and the total production for the previous 25 years was less than 3,000 bbl. per acre. The sand body of this property is reasonably uniform, much more so than it is at many other properties in Northeast Oklahoma.

To obtain the same rate of water coverage on a 10-acre Burbank five-spot as on this Nowata property will require around 550 bbl. of water per well per day or 13,750 bbl. per day for a quarter section. The pressure required will depend upon the permeability of the old Burbank sand body.

Three core analyses from South Burbank, the drilling history of the old field and Dr. Melcher's porosity work on the old Burbank field were used in arriving at a fair permeability figure for the old Burbank sand. It appears that a weighted average permeability will not be less than 150 millidarcys for the better producing properties.



Curve is an approximation of the average behavior of six "floods" in Northeast Oklahoma

The depths of the old Burbank wells will provide a controlled hydrostatic head at 550 bbl. per input well per day for permeabilities as low as 75 md. This permeability would require about 2,500 ft. of water head; 150 md. would require about 1,200 ft. of water head and 300 md. would require about 600 ft. of water head. These data result from the use of a modified Muskat formula that has been found to agree satisfactorily with actual water input rates.

$$\frac{Q}{kh\Delta P} = \frac{0.0001615}{\log_{10} W - 1.7595}$$

Q = water input rate (barrel per well per day)
k = permeability (millidarcys)
h = sand-body thickness (feet)
ΔP = total pressure on sand (pounds per square inch)
W = distance, water well to water well (feet)

Substituting in this formula 150 for k, 40 for h, 1,100 for ΔP (hydrostatic head at 2,500 ft. in depth), and 660 for W, it is found that Q (the water input rate) is a few barrels over a thousand.

Theoretically the water advance through a sand body with the same permeability would be a uniform three-dimensional system but of course this would not result because the sand-body condition would vary from top to bottom and from well to well; however, it appears reasonably certain that the old Burbank sand is as uniform if not more so than any Pennsylvanian sand in the Mid-Continent.

It is not suggested that the actual figures, used in this study, will hold over large areas of the field, in fact, the contrary would be expected. For instance, the residual reserves of leases that have produced over 20,000 bbl. of crude per acre, by 1927, according to J. Melville Sands, "Burbank Field, Osage County, Oklahoma," Structure of Typical American Oil Fields, Volume 1, American Association of Petroleum Geologists, Page 224 (1929), will probably be less than the calculation and the residual reserves of the low-production areas may well be above the figures set forth.

It follows that the hydrostatic head would be sufficient for optimum water input rates, only over these areas that have indicated high permeability from the production history; thus it would appear that the majority of the area of the field will require pump pressures behind the hydrostatic head for desirable water input rates.

All the cost data should probably be scaled upward 10 per cent because of increases in costs which have come recently.

McClintock's Curve

A general idea of a five-spot flood-pattern behavior is shown by McClintock's water-flood production curve (The Oil and Gas Journal, Jan. 30, 1936, p. 56). McClintock's curve shows the oil production for a life of 6 years. By taking the area under the curve as the total recovery, it is seen that 66 per cent of the recovery is obtained the first 2 years, 28 per cent the next 2 years and 6 per cent the last 2 years. McClintock's data check very well with the Nowata data in accompanying graph.

The following table shows the results of applying McClintock's curve to a hypothetical Burbank 10-acre five-spot unit.

40 PER CENT FLOOD RECOVERY ON A 10-ACRE FIVE-SPOT UNIT

Life of property—	Per cent recovery	Recovery (bbl. oil)	Av. production (bbl./day/well)
1st 16 months	66	99,000	206.0
2d 16 months	28	42,000	87.5
3d 16 months	6	9,000	18.7
Total 4 years	100	150,000	....

Life of property—	Per cent recovery	Recovery (bbl. oil)	Av. production (bbl./day/well)
1st 24 months	66	99,000	138.0
2d 24 months	28	42,000	58.0
3d 24 months	6	9,000	12.5
Total 6 years	100	150,000	....

Relative to flood behavior, the probabilities are that the shape of the production curve for all

successful floods will approximate McClintock's curve.

The conditions assumed in this report indicate that the life of a Burbank 10-acre five-spot unit would be about 5 years.

The supposition is that water could be obtained from the Arkansas River.

DEVELOPMENT AND INSTALLATION COSTS

Drilling (Item A):	
25 wells, 2,600 ft., 6-in. casing cemented and sand cored or drilled and shot at $3 per foot	$195,000
Casing, 6-in., used good condition, 2,500 ft. per well, 25 wells at 75 cents per foot	46,875
Total (Item A)	$241,875

Note: Item A is reduced to $164,475 if half the cost of the 16 line wells is paid by adjoining property owners.

Water-treating plant and pipe line (Item B):	
Treating plant, 25,000 bbl. per day capacity (estimate based on cost of other plants)	$ 50,000
Water line to Arkansas River, 10 miles, 50,000 ft. 10-in. 22-lb. steel at $75 per ton	41,250
Labor (laying, welding and filling) at 50 cents per foot	25,000
Total (Item B)	$116,250

Note: The water system would consist essentially of a 50,000-bbl. roughing basin, constructed by damming a draw or excavating an earthern reservoir; wooden settling tanks; dry-feed chemical machines; filters, clear well; one high-duty pump at the river: two low-duty service pumps at the lease; a back-wash gravity tank or pump for filters; service water lines to input wells and 25 water meters. A roughing basin is necessary because the Arkansas River is very turbid at times.

DEVELOPMENT AND INSTALLATION COST SUMMARY

Drilling (Item A)	$241,875
Water plant and pipe line (Item B)	116,250
Total development and installation (Item C)	$358,125

OPERATING COSTS OF QUARTER SECTION FLOOD

Pumping-equipment investment (not charged to the project because of the high-salvage value):	
16 gear-reduction pump units, 15,920 lb., 72-in. stroke	$37,368
Counter weights, 16 wells, 4 per unit	4,894
16 prime movers at $1,000	16,000
Sucker rods for 16 wells, ⅞-in.	10,620
Tubing, 2½-in. upset, 2,600 ft. per well, 16 wells	12,243
Pumps, 2½-in., 12-ft., for 16 wells	1,426
Polish rod, stuffing boxes and supports for 16 wells	646
Bolts, foundation, for 16 wells	553
Total pumping-equipment investment	$83,750

Operation costs charged to flood project: Operation costs are charged to the 16 producing wells as cost per well per month. This includes labor, replacements also interest and depreciation on pumping equipment

Operation Charges (Item D)

	Cost per well per month
Interest at 6 per cent on pumping equipment	$ 26
Depreciation at 10 per cent on pumping equipment	44
Pumping power on lease	90
Labor and replacements on lease	90
Water system operation cost at 2½ cents per 1,000 gal.	27
Total operation cost (per well per month) (Item D)	$277

Note: The water produced on the lease will be reused, thus reducing the amount pumped from the river.

RECAPITULATIONS

Schedule X (life of flood at 48 months):		
Gross revenue, 40 per cent recovery of reserve at $1 bbl. (oil)		$2,406,400
Royalty at one-eighth	$300,800	
Development and installation (Item C)	358,125	
Operation (Item D × 16 × 48)	212,736	
Total costs	$871,661	
Net profit		$1,534,739
Schedule Y (life of flood at 72 months):		
Gross revenue, 40 per cent recovery of reserve		$2,406,400
Royalty at one-eighth	$300,800	
Development and installation (Item C)	358,125	
Operation (Item D × 16 × 72)	319,104	
Total costs	$978,029	
Net profit		$1,428,371

Recalling that in this study an interstitial water saturation of 20 per cent was used, it might be well to use a figure more in line with experience obtained from the Bartlesville sand in Northeast Oklahoma. Thus assuming the interstitial water to be 30 per cent, original oil saturation 70 per cent instead of 80 per cent, the net profit under Schedule X becomes $1,140,089 and under Schedule Y $1,033,721 for the quarter section.

Salt Water as a Water Supply

There is probably sufficient salt water for flooding from the sands above the Burbank as the Layton, Tonkawa and the Hoover sand series carry water. A type log of the Burbank field (according to J. Melville Sands) shows approximately the following sand sections: Layton, 40 ft.; Tonkawa, 40 ft.; Hoover sand series (650 to 1,350 ft.), 150 ft. of sand.

Detailed information on the character of this water for flooding is not available but it is not considered corrosive because old water strings that have been pulled were found in splendid shape. This suggests that the salt water handled in a closed system would be satisfactory. It would be necessary, of course, to avoid admixture of barium and sulfate waters and the presence of barium in Pennsylvanian waters is not uncommon. If carbonate clogging on the face of the Burbank sand occurred, small acid treatments at intervals should prove a sufficient remedy.

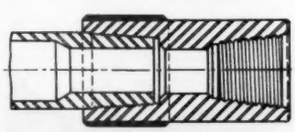
A casual inspection of the drilling and operation cost for a sufficient number of separate salt-water wells to produce 25,000 bbl. per day indicates that the Arkansas River as a water source will be as economical as the water-well drilling plan.

However, if the input wells could also be used as a water source, the water-plant cost used in

For years, oil operators have been faced with the problem of tool joint wear—a problem even more serious today because of increased drilling depths . . . higher penetration rates . . . faster rotating speeds . . . and open hole drilling operations. These factors take their toll in rapid tool joint wear, which not only dangerously weakens the pipe connections *but also increases drilling and maintenance costs!*

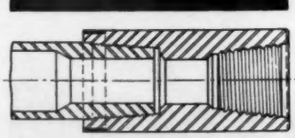
But now it is possible to actually *double* tool joint life under even the toughest drilling conditions by applying Stoody Hard-Facing Alloys direct to the wearing surfaces of these tool joints. Not only is wear greatly reduced, but correct elevator contour is maintained—an important safety point!

Electric Tube Borium or Coated Stoody Self-Hardening is used for this application. The coating can be applied either over the regular tool joint surface or inlaid into it to eliminate over-gauge joints—whichever is preferred. Either way, you'll make substantial savings with this new Stoody application!



Schematic drawing illustrating method used in Mid-Continent for hard-facing tool joint boxes. Coated Stoody Self-Hardening is applied directly to the surface of the collars, no recess being machined into them. After heating joints to approximately 300° F. the hard metal is deposited to a thickness of from 1/8" to 3/16".

Elevator shoulders hard-faced on new boxes, an application which has proved highly successful in California. Joints are undercut ⅛" and heated to about 300° F. before hard-facing with either Electric Tube Borium or Coated Stoody Self-Hardening. Schematic drawing at left illustrates application in detail.



Get the whole story on this new economical way of prolonging tool joint life. A special engineering bulletin has been prepared describing in detail the method and materials recommended. Send for it now!

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STOODY COMPANY *Hard Facing Alloys*

this study would be eliminated. Immediate criticism of this idea would be expected because of the physical variations of the Burbank sand body and the uncontrolled upper-sand water supply, seem sufficient to preclude the use of the salt water obtainable from each of the input wells.

The writer feels that the engineer might surmount these obstacles by a procedure similar to the following:

1. The coring of the Burbank sand body in each of the input wells will provide permeability data from which the hydrostatic head can be calculated for a predetermined water input rate for each water input well.

2. Six or eight-inch pipe is cemented at the top of the Burbank sand body and then cement squeeze jobs are made at each of the upper water-sand levels.

3. The pipe is then reperforated opposite a sufficient number of these sands to furnish the required hydrostatic head. It should not be difficult to measure the water levels; possibly a simple wire-line float device would suffice or sonic equipment could be used.

The above outline of procedure would approach a control which, of course, would not be as positive as pump control.

Thief streaks in a pay sand are a handicap to any secondary-recovery plan and even this obstacle might be handled by some type of cementing or plugging operation.

In this study the five-spot pattern is used only as an example and as a structure for computing costs. The most economical pattern and well spacing will depend upon the core-analysis data and the production history of the various parts of the Burbank field.

Remarks

The 40 per cent recovery estimate may be slightly high but to offset this, the pay is probably greater than 40 ft.

Obviously it is necessary to make a core-analysis survey of the old Burbank field before actual expectations can be used in the field of business.

It appears that this sand body over parts of the field will take greater volumes of water per day than the volumes used in this report but by forcing the drive in soft sand, damage might result by bringing the property on water production too soon. It seems logical that a certain amount of time is necessary for the oil to coalesce and collect ahead of the water bank.

●

Compressor Exhaust Valve Gage Recapped With Nickel

Skelly Oil Co. was having trouble keeping enough valve cages at its Schafer plant when the idea of the cap for recapping the cages was conceived. Due to foundry sand, hard water, etc., the valve cage would become clogged with scale over a period of about 1 year and burst. It was impossible to repair by welding due to the scale, therefore it had been the policy of the company to place these cages in the junk pile.

With the cap, the top of the cage can be cut out, the scale removed and the cage completely repaired in about 8 to 10 hours, machinist time, with the casting costing 7 cents per pound and weighing approximately 55 lb. Therefore, the total cost of putting the cage into service again is $18.35 compared to $65, the price of a new cage.

One of the above-mentioned caps has been in service since March 9, 1940, without being removed for any reason whatever.

The above operating "kink" was presented by A. M. Edwards, machinist for Skelly Oil Co. at Skellytown, Tex., at the 1941 annual meeting of the Natural Gasoline Association of America in Dallas, Tex. The kink was awarded second prize in Class D.

●

Injector for Liquefied Petroleum Malodorant

The liquefied petroleum malodorant injector is for the purpose of introducing stench, under pressure, into liquefied petroleum gases to eliminate evaporation loss and waste in filling truck tanks or tank cars.

The injector has an enclosed storage container made from 10-in. pipe, 30 in. long, having a capacity of 10 gal., and sets along pump high enough so as to gravity or be pressured into an enclosed container made of 4-in. pipe, 16 in. long, with gage glass that is calibrated so as to measure the volume of stench required. This container has a ½-in. line tied from top to high-pressure gas line and a ½-in. line tied from the bottom of container to the suction line of pipe. The storage tank is closed off, the valve on high-pressure line is opened, the loading pump is started, and then the valve on the suction line of pump is opened. The required volume of stench is introduced into the suction of pump, depending on the volume of liquefied gas to be loaded.

The aforegoing idea was presented at the "Operating Kinks" session of the Natural Gasoline Association of America at its 1941 meeting in Dallas, Tex. It was given by F. E. Thompson, plant superintendent for Warren Petroleum Corp. at Salem, Ill., and was awarded fourth prize in Class C.

WE MAY HAVE TO SAY *NO!*

● The Twin Disc Clutch Company is solidly behind the National Defense Program. Priorities are being given the right-of-way. This, you, as a patriotic citizen will agree, is the right attitude to take even though it may mean some sacrifice on your part when we have to say "No" to your urgent requests for immediate delivery of a new clutch.

With our greatly increased facilities, a part of our production can be devoted to non-priority business if you, as a valued customer, will cooperate by anticipating your needs and not asking for an impossible delivery date.

Through our 28 parts stations, we have been able to keep owners of Twin Disc-equipped machines supplied with needed parts and we expect to be able to maintain this service. TWIN DISC CLUTCH COMPANY, 1328 Racine Street, Racine, Wisconsin.

Illustrated: Twin Disc Model E Heavy-Duty Clutch (left) and Twin Disc Power Take-off.

Progress in METALS

By W. L. NELSON

Substitute High-Temperature Steels

Abstract: Schmidt, M., and Lamarche, W., Heat-Resisting Chromium-Manganese Steels as Substitutes for Chromium-Nickel Steels, Korrosion u. Metallschutz, Vol. 16, Dec. 1940, pp. 425-27. Taken from Metals & Alloys, June 1941.

THE following is an abstract of an article in German which indicates the usefulness of substitute high-temperature casting steels. The problem in the United States is somewhat different because both chromium and manganese are imported to a large extent but they can be obtained with more ease than nickel which has heretofore been widely used in high-temperature castings for the oil industry.

Recent investigation and a survey of the literature show that, in general, the oxidation-resisting chromium-nickel steels can be replaced for temperatures up to 1,750° F. by chromium-manganese (and chromium-managenese-nitrogen) steels, and also by chromium-managenese-silicon steels.

Chromium-manganese steels are also claimed to be capable of higher loading and to have a higher resistance to oxidizing sulfur-containing gases. They should not, however, be used in reducing atmospheres as they are sensitive to carburizing gases.

A typical heat-resisting chromium-manganese steel has 0.10 per cent C, less than 0.50 per cent Si, more than 15 per cent Mn, less than 15 per cent Cr, with additions of titanium, tantalum, and columbium; its properties are 50,000-63,000 lb. per sq. in. elastic limit; 85,000-100,000 lb. per sq. in. ultimate strength, 40 per cent elongation, and notch-impact strength of 25 m.-kg. per sq. cm.

The chromium-manganese-nitrogen steels (0.10 per cent C, less than 0.50 per cent Si, more than 15 per cent Mn, less than 15 per cent Cr, and 0.25 per cent N) has 65,000-85,000 lb. per sq. in. elastic limit, 100,000-130,000 lb. per sq. in. ultimate strength, 40 per cent elongation, 25 m.-kg. per sq. cm. notch-impact strength.

The composition of the chromium-manganese-silicon steel is 0.10 per cent C, 3.5 per cent Si, more than 16.5 per cent Mn, less than 10 per cent Cr, with additions of titanium, tantalum, and columbium. Its properties are 50,000-63,000 lb. per sq. in. elastic limit; 100,000-120,000 lb. per sq. in. ultimate strength; elongation 35 per cent, and 18 m.-kg. per sq. cm. notch-impact strength.

"Creep test" results indicated the chromium-manganese-nitrogen and the chromium-manganese steels to be better at 1,100°, 1,200°, 1,300°, and 1,400° F. than chromium-nickel steels of the 25/20 and 20/14 types. The chromium-manganese-silicon steel showed creep strength at 1,100° and 1,300° F. equal to the chromium-manganese steel but lower than the Cr-Mn-N steel.

(Chromium-manganese steels with chromium content less than 15 per cent would be expected to scale appreciably at temperatures above about 1,500° F. Since additions of 3.5 per cent Si requires chromium less than 10 per cent to keep the steel austenitic, no improvement in scaling resistance would be expected. The details of the creep test are not given but since Schmidt has previously quoted tests for very short times, the data given above are of doubtful value. H.C.C.)

●

Lined Cast-Iron Pipe

THE use of lining materials in cast-iron pipe may result in a greatly superior product from the standpoint of the useful length of service and relative freedom from the friction loss that is caused by pitting or tuberculation. Various lining materials such as tar or asphalt, portland cement, and special cement mortars have been used.

The Enameline pipe of the American Cast Iron Pipe Co. of Birmingham, Ala., consists of centrifugally cast pipe having a special cement mortar applied to the interior surface, a final coat of asphalt paint on the inside, and a coat of coal-tar pitch on the outside. For some services such as the handling of very soft water, this company recommends the use of cement-lined pipe having a thicker lining than the Enameline pipe. The American Standards Association specifies the properties of cement-lined pipe in its specification A.S.A. A 21.4. The method of producing enamelined pipe involves the application of the cement mortar to the interior of the pipe while the pipe is revolving. The mortar is uniformly troweled onto the interior wall by means of a special machine. The cement lining is effectively bonded to the bare metal wall. Thick linings are produced by continuing the operation for a longer period of time. The gradual buildup of the cement lining results in a good cement-to-metal bond, the elimination of voids, and the production of a homogenous uniformly thick coating. After the cement has taken its initial set, the asphalt seal coat is applied.

Although the main advantages of Enameline pipe are the long useful life and the reduction of friction losses, there are several less obvious or indirect advantages which in part are due to the extra strength and thickness of the Mono-Cast centrifugal pipe of the American Cast Iron Pipe Co. Among these advantages are:

1. An extremely long life which in some instances is more than twice as long as ordinary cast iron.

2. High factor of safety against internal working pressure and water hammer.

3. High factor of safety against external loads due to weight of backfill, impact from truck loads or when loaded as a beam.

4. Ability to withstand the usual shocks incident to transportation and installation without damage to pipe or lining.

5. Adequate metal thickness, sufficient to permit making tapped connections for standard services without damage to pipe or lining.

6. Low fire-insurance rates have been established by insurance companies because of the dependability of cast-iron pipe in supplying water.

7. Low maintenance expense.

8. Lowest annual investment expense. It is sometimes amortized on the basis of 100 years' service.

9. High reclaim or salvage value.

10. Permits electrical thawing of frozen mains and services.

11. Elimination of necessity for cleaning mains; Enameline prevents tuberculation.

12. Permanent maintenance of initial flow factor of $C = 140$, with uniformly low pumping costs.

13. The pipe is of large diameter so that the final cross-sectional opening is the same as in regular cast-iron pipe.

Cast-iron pipe is used most widely in handling water or sewage but it would seem that certain refinery or natural-gasoline plant services might justify the use of cement-lined pipe.

Courtesy American Cast Iron Pipe Co.

Enameling operation showing conveyer tube head protruding from spigot end of pipe after having applied cement mortar. At far end, cement mortar feed line. Traveling shoe on conveyor-tube head is shown at the near end

Spectrograph to Analyze Oil Will Feature Laboratory

By W. T. ZIEGENHAIN

THE Mid-Continent petroleum industry is being supplied a research institution which because of natural advantage can well serve the industry on a national scale. The organization under which the work will be done has been incorporated as the University of Oklahoma Research Institute, a nonprofit organization, and at its head is Lloyd Noble, well-known drilling contractor. Erle P. Halliburton, internationally known well-servicing authority, has been elected vice president. Direction of the research institute is in the hands of Dr. Homer L. Dodge, dean of the graduate school and director of engineering physics in the university. The work will be financed mainly through fellowships.

Most of the work to be undertaken will be housed in a new $407,500 research institute building under construction by the state and on the grounds of the university at Norman. Considerable equipment will be moved from the university's physics department to the research laboratories and additional equipment will be purchased as needed. The entire physics department will be housed in the new building. In order that the most modern facilities be provided in the laboratories, professors of the university have this summer been visiting many eastern research laboratories. Work on the new quarters will start this fall.

A feature of the new laboratory will be the spectroscopy equipment for the investigation of conditions of materials as recorded by infrared light rays. This is particularly applicable to the study of petroleum hydrocarbons. Dr. J. Rud Nielsen, under whose direction this type of research is undertaken, said:

"The electronic absorption spectra of the paraffin hydrocarbons lie in the far ultraviolet and consist largely of ill-defined bands. The same is true of the saturated cyclic hydrocarbons. The olefins and acetylenes have absorption bands near the short-wave end of the range of a quartz spectrograph, but these bands are not suitable for analytical purposes. Hence, the quartz spectrograph is not very useful for analyzing petroleum products.

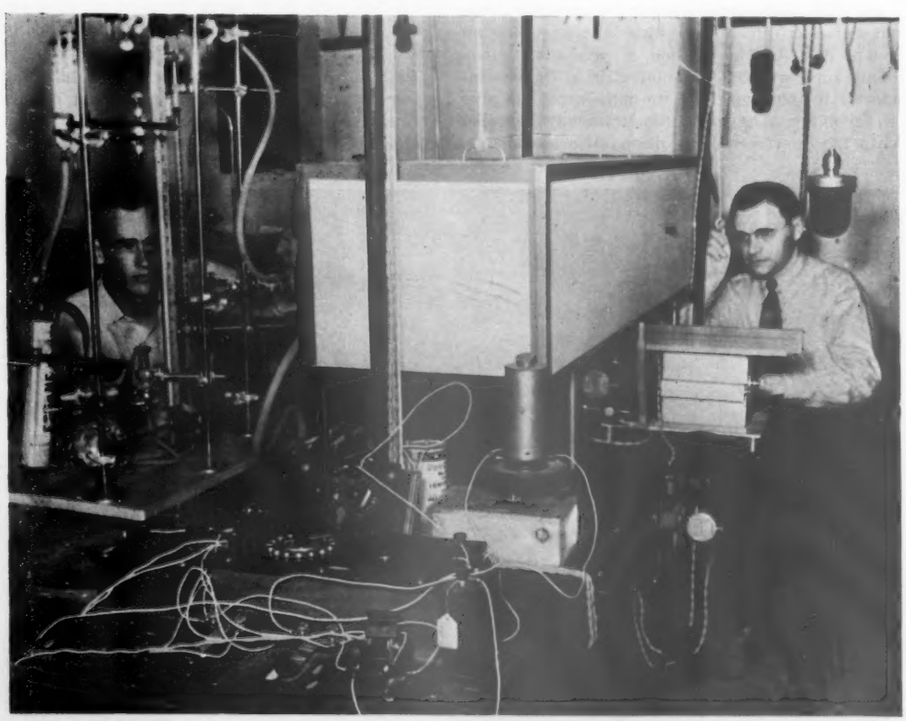
"The vibration spectra, on the other hand, which can be observed either as absorption spectra in the infrared region or as Raman spectra in the visible or ultraviolet, are very well adapted to purposes of analysis. While some vibration frequencies are common to all the paraffins, other frequencies are characteristic of the individual compound or isomer. Since the Raman or infrared spectrum of a mixture is simply the superposition of the spectra of the individual compounds, the analysis by means of vibration spectra is fundamentally simpler than the analysis of metallic alloys by emission spectra. Moreover, the infrared and Raman spectra can be observed without producing any change whatsoever in the sample.

Dr. Homer L. Dodge, director of the University of Oklahoma Research Institute

"The Raman effect, i.e., the molecular scattering of light with change in frequency, has been investigated at the University of Oklahoma almost since its discovery in 1928, and, after the completion of a large liquid-prism spectrograph designed by Dr. Nielsen, the university has perhaps the best equipment for Raman spectroscopy in the country. For measuring the intensities of the Raman bands there is available a recording microphotometer designed and built by Dr. F. W. Crawford (now with the Phillips Petroleum Co.) Two quartz spectrographs are available at the university for the determination of aromatic compounds in gasoline by their ultraviolet absorption spectra.

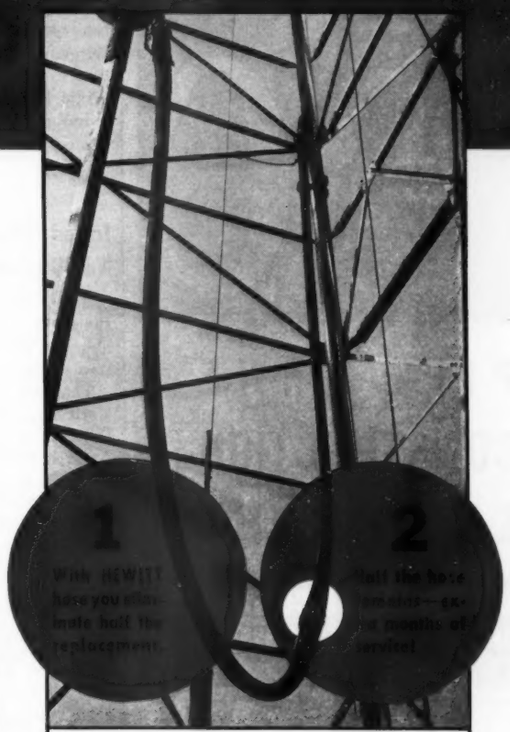
"Through the generosity of Robert E. Lee and the Reynolds-Lee Engineering Service Co. a large infrared spectrograph with automatic recording has recently been acquired by the university. This spectrograph was designed by a former student of Dr. Nielsen, Dr. Norman Wright, research physicist at Dow Chemical Co. Dr. Wright is a pioneer in the industrial application of infrared spectroscopy. He has been remarkably successful in solving a variety of analytical problems by this method. In the practical application of the Raman effect to gasoline analysis Russian scientists have been the pioneers."

The purpose of developing spectroscopic methods of analyzing hydrocarbon mixtures is to furnish petroleum chemistry with much-needed analytical tools. Because of the complexity of most petroleum products the spectroscopic methods will usually have to be combined with effective fractionation. The development of the infrared and Raman methods of analysis is a large undertaking that will take considerable time.



Dr. J. Rud Nielsen (right), professor of theoretical physics, and Don C. Smith (left), a Reynolds-Lee fellow in spectroscopy, operating the university's infrared spectrograph

A MUD HOSE THAT CUTS COSTS IN HALF



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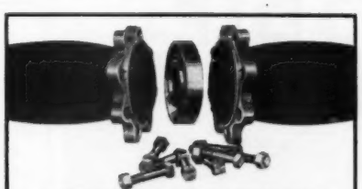

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Pipe-Line Activity

National Defense Pipe Lines, Inc., Will Build Tex.-Pa.-N. J. Line

National Defense Pipe Lines, Inc., is the name selected by the organization formed by 11 major companies for the construction of a crude-oil pipeline system which will connect Longview, Tex., Wood River, Ill., and refining points in Pennsylvania and New Jersey. Further details on this project appear in an article elsewhere in this issue.

Ickes Gives Highest Priority To Portland-Montreal Line

Petroleum Coordinator Ickes announced that the OPM had granted the highest priority obtainable for material to complete the crude-oil pipe line to Canada before winter.

The pipe line, extending 236 miles from Portland, Me., to Montreal, Canada, will expedite the flow of oil to Canada and the flow of munitions from there to Great Britain, Mr. Ickes said.

Mr. Ickes declared he had recommended the higher priority because the "A-2" priority previously granted was proving "inadequate to make the necessary materials available for construction of the United States section of the line prior to the time when winter conditions will seriously interfere with operations."

He termed the pipe line "an integral part of the aid-to-Britain program."

Ohio Fuel Gas Co. Expands System

Transmission facilities of the Ohio Fuel Gas Co. are being expanded to increase delivery of gas during peak demands. Two 12¾-in. o.d. welded lines are being constructed between gas-storage areas and major compressor stations.

In the southern section of the state a line will extend from the Benton storage project in Hocking County to Crawford compressor station in Fairfield County, Ohio, a distance of 17 miles.

In the north central part of the state 12½ miles of line will extend from Pavonia compressor station in Richland County south to Monroe storage project at a point near Lucas.

Georgia County Commission Obstructs Southeastern Line

Wiley Moore, chairman of the board of Wofford Oil Co., Pure Oil Co. distributor in southeastern states, attacked the action of the Fulton County (Ga.) Planning Commission in postponing for a week a public hearing on the request of Southeastern Pipe Line Co. to locate a terminal point near Adamsville, Ga.

"This causes a delay," Mr. Moore explained, "right in the middle of a critical emergency."

Mr. Moore said the Southeastern pipe line extending northward from Port St. Joe, Fla., to Chattanooga, Tenn., can be completed within 90 day, if not held up by fights over location of terminal points.

Cities Service Will Lay Gas Line to Cement, Okla.

Preparations are under way for the construction of a 55-mile 16-in. natural gas pipe line from the west end of the Cement field in Caddo County, Oklahoma, to the Oklahoma City district by the Cities Service Gas Co. Buying right-of-way for the line started last week.

Deal for the line was made by Ray Stephens, Inc., of Oklahoma City, owners of several thousand acres of developed and semideveloped gas leases in the west part of the field.

At present the Cement field is served by the Oklahoma Natural Gas and Consolidated Gas companies.

Cost of the trunk line was estimated at more than $750,000. Construction is to be by Cities Service crews; it will cross the Canadian River near Union City, Oklahoma. At Oklahoma City the line will tie into the Cities Service system which extends north into Kansas and the Middle West.

The Stephens company is to construct a gathering system in the field and is considering construction of at least one gasoline plant.

Texas Pipe Line Prepares To Serve Apache Area

The Texas Pipe Line Co. announced plans for construction of a 100-mile pipe line from the New Apache oil field in Caddo County, Oklahoma, through the Cement field to its main line at Seminole, Okla.

The line will be 8-in. in diameter and will have a daily capacity of 25,000 to 30,000 bbl. daily. Construction will be started as soon as pipe can be obtained. The building of the line is also contingent on obtaining oil production in the new area.

The Apache field was opened recently by a Texas Co. wildcat well which flowed 122 bbl. of oil in 10 minutes.

Cities Service Will Continue To Supply Union Gas System

The Federal Power Commission has announced it had been informed that an agreement had been reached under which Cities Service Co., of Bartlesville, Okla., would continue to serve the Union Gas System, Inc., Independence, Kans.

A hearing on the subject, set for August 8 at Kansas City, Mo., was postponed indefinitely.

The commission said Cities Service Gas Co. on June 23 filed notice of intention to discontinue service to Union Gas after August 22 under an agreement dated November 10, 1938, and that Union Gas subsequently filed a protest to such cancellation, stating it would affect the public interest adversely.

Kaw Pipe Line Lets Contract for Bemis-Ray Line to Fredell

Kaw Pipe Line Co. let contract to Fredell Construction Co. for the laying of a 40-mile 6-in. crude oil line from the Ray pool to Bemis in western Kansas. Work will be started within a week.

Empire Takes Up 56 Miles of Kingwood-Cushing, Okla., Line

Empire Pipe Line Co. is taking up 56 miles of 6-in. pipe between Kingwood station and Cushing, Okla. This line was laid by the company in 1922. Williams Brothers Corp. has the contract for taking up the pipe and handling through the pipe yard which has been established at Cushing where

Pipe-Line Personalities . . . . . H. B. Haney

As manager of transportation for Tide Water Associated Oil Co. on the Pacific Coast, Harrison B. Haney directs all pipe-line construction and operation, manages a fleet of ocean-going tankers and oversees all traffic operations and communication system.

Mr. Haney is a native Indianian, but moved to California at a tender age. After high-school days, he took a job with the Northwestern Pacific Railroad and served 4 years as draftsman, pole-line laborer and assistant engineer. He joined Tide Water in 1917 as a draftsman, but soon acquired the title of engineer.

His early service with the company as engineer included directing an extensive service-station construction program, in doing which he perfected a design which for nearly 20 years was the company's standard service station. On another assignment he solved what had been a water-supply problem in the oil fields around Santa Maria.

During a rapid series of promotions, Mr. Haney served as superintendent of construction, resident engineer, engineer of construction and assistant chief engineer, all in the Los Angeles office of the company. In 1929 he received his promotion as chief engineer of Associated Oil Co., at which time he moved his office to the company's San Francisco headquarters, and in 1936 he was elevated to the position he now occupies. In 5 years he has built a pipe-line organization for which other operators have often expressed frank admiration.

Away from his office, Mr. Haney enjoys a reputation as a good golfer and as an ardent swordfish angler.

it is cleaned, plain-ended, double-jointed, graded and racked. Inspection of the work of taking up the line is being done by L. M. Stubblefield. Most of this pipe will be used for the construction of the 40-mile line which will extend the Kaw Pipe Line Co.'s system from Bemis pool to Ray pool in western Kansas which has been authorized. The work of taking up the Empire line was half completed at the beginning of the week.

Ajax Prepares to Sell Standard of Ohio Stock

Standard Oil Co. of Ohio filed a registration statement with the regional office of the Securities and Exchange Commission covering 186,667 shares of $25 par value common stock owned by the Ajax Pipe Line Corp. The stock will be underwritten by a group headed by F. S. Moseley & Co., Smith, Barney & Co. and Lee Higginson Corp.

Ajax Pipe Line Corp. has agreed to apply the entire net proceeds of the sale of the stock, first to the redemption October 1, 1941, of its outstanding 51,000 shares of $7 preferred stock, and second to the part redemption pro rata on the same date of its outstanding 61,429 shares of $7 second preferred.

Although the offering does not represent new financing by the Standard Oil Co., because of its holdings of preferred stocks in Ajax Pipe Line Co., it would receive approximately $1,500,000 on redemption of those issues.

This is regarded as a routine transaction to make needed adjustments in the financial structure of Ajax Pipe Line Corp.

Work Progresses on Gulf Looping Program

Work started at the beginning of last week on the loops west of the Mississippi River contracted for the looping program of Gulf Refining Co., Tulsa, pipe line division, which consists of more than 200 miles of 10-in. in 13 loops. B and M Construction Corp., which has contracted about 70 miles, began early in the week on No. 4 Loop near Monett, Mo. Williams Brothers Corp. began at the same time near Broken Arrow, Okla. Jones & Brooks, Inc., is completing this week 20 miles of 8-in. on the section of the company's system between Dublin, Ind., and Cincinnati, Ohio. Parkhill Truck Co. is stringing pipe between Marionville, Mo., and the Mississippi River. Jones & Brooks, Inc., will start on 120 miles of loops east of the Mississippi River when pipe becomes available for that section.

Chicago Line Completes First Loop in Expansion Program

Natural Gas Pipeline Co. of America completed this week the 88-mile 26-in. loop on the 24-in. pipe line to Chicago, Ill. This loop extends from a point 12 miles south of Meade, to a point near Kinsley in western Kansas. This loop and a 33-mile lateral from the main line near Spearman, Tex., to the company's new compressor station in Moore County, Texas, were constructed by W. A. Bechtel Co.

Hope Opens Office for La.-W. Va. Pipe Line

Preparations are being made for the construction of a 20-in. gas pipe line from Monroe, La., to West Virginia by Hope Natural Gas Co., a Standard Oil Co. of New Jersey affiliate.

The company has established offices in Monroe, La., and is buying rights-of-way to Greenville, Miss., where the Mississippi River will be crossed. From there it will go through Central Tennessee and into West Virginia.

Panhandle Eastern Will Lay 51 Miles in Illinois

Panhandle Eastern Pipe Line Co. has let a contract to Oil States Construction Co. to lay 43 miles of 8-in. from a point near Peoria to Galesburg, Ill., and 8 miles of 4-in. lateral. The pipe is scheduled to arrive September 15. Work will start at that time.

Pipe Line Company Is Chartered in New Mexico

The state Corporation Commission of New Mexico has chartered the Petroleum Products Pipeline Co. of Gallup, N. M., organized by Ray McGlothlin and E. T. Barker of Gallup and Quincy Adams of Albuquerque, N. M.

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Illustration shows "Oilwell" No. 64 Universal Hoisting Unit with remote control for CT-1715 Rotary Drilling Unit, drilling a 5221 ft. well in Oklahoma in 16 days total elapsed time, including cementing and moving on and off location.

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with 4½" Drill Pipe (6 lines)	(Feet)	5000
with 3½" Drill Pipe (6 lines)	(Feet)	6000
Drum: Spool Diameter	(Inches)	16
Width between Flanges	(Inches)	26½
Brake Rims, Diameter by Face Width	(Inches)	46 x 7⅝
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Height, Over-all	(Feet)	6½
Width, Over-all without Catheads	(Feet)	8
Weight, Complete for Internal-Combustion Engine Drive but less Engine and V-belts	(Pounds)	21,850

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★ Low initial cost and low operating expense in relation to its high standard of performance.

★ Ample capacity for wide range of service with extreme flexibility of operation. Recommended maximum drilling depth with 3½" drill pipe and six lines—6000 feet; with 4½" drill pipe and six lines—5000 feet. Four hoisting speeds and two rotary speeds.

★ Friction-clutch rotary drive facilitates spinning pipe and saves time on round trips.

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FIELD DEVELOPMENTS...

HIGHLIGHTS FROM THE WEEK'S NEWS—

Drilling continued at a high rate in all areas last week and the total completions for the country was only 25 less than the 699 record total of the previous week. While no single area was responsible for the increase, North Texas showed the biggest consistent gain with nearly twice as many wells drilled during July as during June. In some branches of the industry, fears were expressed that national policy, priorities and restrictions on the use of steel might result in a sharp curtailment of production and all activities connected therewith. But if operating companies shared these fears, they were giving no indications of it last week.

Rather, operators watched the progress of the greatest pipe-line and tanker building program the country has ever seen, the growing domestic demand for products and the expanding exploration by major companies which might be expected to set the pace. Supply houses were still able to furnish most of the equipment and machinery and the Government itself was encouraging drilling in such areas as the Osage Reservation in Oklahoma and the great tracts of public lands in the Rocky Mountains.

Nothing spectacular like the Reagan County strike in West Texas was reported, but Stanolind Oil & Gas Co. confirmed the importance of its recent discovery in extreme western Kansas when the well made another test of the original showing in a stray Pennsylvanian sand after testing to the Arbuckle below 5,600 ft. The two new plays in Michigan—at Reed City and the new Roscommon County field—gained momentum. Wyoming's Tensleep sand, long considered a poor objective because of the heavy, black oil it carried at Salt Creek, was producing a high-gravity oil in the Lost Soldier-Mahoney-Ferris area and being developed rapidly. Wildcatting along the Wilcox trend in the Gulf Coast was at a new high.

LOUISIANA GULF COAST: The north flank of the Gueydan field in Vermilion Parish was shown to be productive in the deep horizons by the near completion of a well at 7,565-80 ft. Two new wildcat locations were announced for the Grandison prospect in La Fourche and Jefferson parishes (p. 97).

TEXAS PANHANDLE: An attempt will be made to link the Waples-Platter and the Ownby pools in Yoakum County through the drilling of a wildcat well about ½ mile south of the latter pool. Interest in a wildcat near Lubbock was stepped up when a pay was picked up in the Clear Fork lime at 4,865 ft. (p. 75).

SOUTHWEST TEXAS: Gas-distillate production was opened from a new horizon in the Washburn field by the deepest well ever drilled in that particular area. The well was bottomed at 11,042 ft. in the Edwards lime, but pay was coming from a higher zone (p. 84).

CALIFORNIA: Operators were staring in the face of a possible loss of 75,000 bbl. of their market due to the embargo on foreign shipments and the scheduled transfer of 10 tankers to Atlantic service. The second well in the new Raisin City field was cutting 8 per cent water and operators changed the location of the next test. Unit operation of the single-phase Paloma field in Kern County was delayed when the Kern County Land Co. refused to accept the productive acreage figure. Shell Oil Co., Inc., was starting a deep test in the Canal field in Kern County (p. 80).

WEST TEXAS: Ellenburger lime pay was found at the Abell pool in northern Pecos County opening the third producing zone for the field. Possibility of a fourth pay zone (in the Permian lime) was expected to result in further testing of the pool while a wildcat to the north was being watched closely for results of testing in the Permian. Amerada Petroleum Corp. was deepening its discovery in Reagan County after it opened production in the Ellenburger there, and a wildcat southwest of the Apco field, in northern Pecos County, had shows of still another Ellenburger pool (p. 75).

OKLAHOMA: Pipe-line outlets proposed for the Cement field put a rosier hue on the entire area and operators in anticipation of the event were continuing the drilling campaign at the accelerated pace set a month ago. Texas Co. plans to build a line from Apache through Cement to existing facilities. Fate of the Apache field was still in the balance as operators were attempting to complete the discovery well and the other four drilling wells were not yet in the pay (p. 72)

MICHIGAN: Reed City in Osceola County continued to hold the spotlight as a new well made 130 bbl. per hour and extended the productive limits of the field a mile to the east. The North Adams field in Arenac County saw the completion of a 2,000-bbl. well. Winterfield in Clare County got a setback when a test was dry in the Dundee (p. 86).

NORTH CENTRAL TEXAS: A 13,000,000-cu. ft. gas well was completed in the Haskell-Shackelford district. A shallow pay was found in the Halsell pool in Clay County and a new basal Strawn sand pay in the deep Clingingsmith field may be realized. Attempt is being made to complete a well in the Ross pool in a conglomerate just above the Ellenburger. Montague, Young and Clay counties shared four wildcats, all of which were scheduled to test below 4,000 ft. (p. 71).

TEXAS GULF COAST: A drill-stem test on a wildcat in the Texana area, Jackson County, showed possible production at 5,145 ft. The gas-distillate field at Clodine in Fort Bend County and the Fig Ridge field in Chambers County were extended by successful completions (p 91).

EAST TEXAS: Casing was being moved in to test the 8,500-ft. test of British American Oil Producing Co. in Henderson County. Best possibility for production was believed to be in the Rodessa section of the Glen Rose lime. A major extension of the Travis Peak pay in the Pittsburg field was a possibility as an outpost picked up 6 ft. of pay at 7,959 ft. (p. 90).

KANSAS: Stanolind Oil & Gas Co. plugged back its discovery well in Kearny County after drilling through the Arbuckle and was testing again at a show in a stray Pennsylvanian sand. The well was swabbing about 20 bbl. an hour. A new pool was opened in Rooks County (p. 88).

ILLINOIS: The Aux Vases sand was proved as the second pay zone in Hamilton County's new Flannigan field and five new tests were under way with more locations staked. Devonian drilling was encouraged at Louden by the performance of recent wells which have been completed with no water (p. 94).

COMPLETIONS IN ALL FIELDS . . .

(Week Ended August 9, 1941)

	Oil	Gas	Dry	Total	1941 total comp. to date	1940 total comp. to date
N. Y., Pa., and W. Va.	91	21	6	118	3,535	3,273
Ohio	14	15	12	41	985	926
Kentucky	4	10	1	15	391	316
Michigan	8	2	6	16	508	724
Indiana	5	2	6	13	311	213
Illinois	60	0	24	84	1,994	2,274
Kansas	43	1	15	59	1,293	1,116
Nebraska	4	0	0	4	59	16
Missouri, Iowa	0	0	0	0	25	25
Oklahoma	32	3	13	48	1,114	1,153
Texas:						
North Central Texas	34	0	27	61	1,691	1,801
West Texas	38	0	3	41	1,283	1,233
Texas Panhandle	13	1	0	14	357	367
Eastern Texas	11	1	3	15	653	344
Texas Gulf Coast	21	0	3	24	650	783
Southwest Texas	28	1	10	39	1,089	1,399
Total Texas	145	3	46	194	5,723	5,927
North Louisiana	9	1	2	12	392	372
Louisiana Gulf Coast	13	0	2	15	530	668
Total Louisiana	22	1	4	27	922	1,030
Arkansas	0	1	3	4	110	101
Mississippi and Southeast	3	0	2	5	150	127
Montana	3	1	0	4	160	116
Wyoming	4	1	0	5	108	97
Colorado, Utah	1	0	0	1	23	11
New Mexico	4	0	3	7	182	439
California	25	1	3	29	682	648
Total United States	468	62	144	674	18,275	18,542
Total previous week	468	69	162	699		
Week ended Aug. 10, 1940	398	48	118	564		

Harrison County Deep Test Is Dry Through Clinton

By STAFF CORRESPONDENT

NEWARK, Ohio, Aug. 11.—Wildcatting in the eastern Ohio area received a setback last week with the Ohio Oil Co. test in Harrison County, Washington Township, dry through the Clinton at 6,255 ft. This test was located 5 miles east of the East Ohio Gas Co. discovery gas well in the same township. Activity continues, however, with three offsets drilling to the latter well and in Monroe Township, Section 8, Benedum-Trees are drilling ahead on the M. M. Chapman test after finding a small show of gas and two bailers of water in the Berea at 990-1,015 ft.

An eastern Muskingum County well made only a small showing of gas in the Clinton and was plugged at 4,685 ft. after the shot failed to improve.

Other completions were scattered through all fields. Meigs County had a 1,250,000-cu. ft. gasser at 861 ft. Tuscarawas County reported a fair gas well in the Clinton at 5,112 ft.

In Noble County, John T. Galey et al have been delayed in the test on the Jacob Ullman farm in Section 21, Elk Township, with caving just above the Onondaga lime. It has again been cemented back to 4,500 ft.

SUMMARY OF COMPLETIONS

Ohio

	No.	Bbl.	Footage
Oil wells	14	50	13,460
Gas wells	15	*7.5	33,108
Dry holes	12	.....	21,096
Total	41	.....	67,664

Indiana

	No.	Bbl.	Footage
Oil wells	5	601	13,531
Gas wells	2	*0.5	1,646
Dry holes	6	.....	10,858
Total	13	.....	26,035

Eastern Kentucky

	No.	Bbl.	Footage
Oil wells	2	25	2,293
Gas wells	10	*7.3	26,896
Dry holes	1	.....	2,779
Total	13	.....	31,968

Western Kentucky

	No.	Bbl.	Footage
Oil wells	2	57	1,282

*Million cu. ft.

OHIO COMPLETIONS

Allen County

Bath Township: Carmen Oil 6 Katherine Stone, Sec. 13, 8 bbl., shot, Trenton, T.D. 1,423 ft.

Athens County

Ames Township: Carpenter & Glazier 1 J. W. Kuhns heirs, SE Sec. 12, ½ bbl., first Cow Run sand, T.D. 190 ft.
Carpenter & Glazier 2 J. W. Kuhns heirs, dry, first Cow Run, T.D. 205 ft.
Carpenter & Glazier 3 J. W. Kuhns heirs, 1 bbl., first Cow Run, T.D. 175 ft.
Bern Township: Bern O. & G. Co. 3 Paul Wogan, Sec. 18, 370,000 cu. ft. gas, Brill, T.D. 1,017 ft.
Canaan Township: L. Wallace 1 Claudia Walton, Sec. 8, 50,000 cu. ft. gas, shot, second Berea, T.D. 1,417 ft.
Carthage Township: Ohio Fuel 1 Frank Guthrie, Sec. 31, 815,000 cu. ft. Maxton, T.D. 1,185 (old well deepened).
Rome Township: Wickens et al 4 Frank Johnson, Sec. 17, dry, first Berea (water), T.D. 1,545 ft.

Ashland County

Hanover Township: Ohio Fuel 1 C. Baldner, Sec. 13, dry, Clinton, T.D. 3,044 ft.

Auglaize County

Union Township: N. E. Masters 1 Albert Gashner, Sec. 9, dry, Trenton, T.D. 1,348 ft.

Harrison County

Washington Township: Ohio Oil Co. 1 W. H. Blackwell, Sec. 2, dry, Clinton 6,071-6,156 ft., shale and shell 6,156-6,214 ft., Red Rock 6,214-55 ft., T.D. 6,255 ft.

Hocking County

Starr Township: Abe Snyder 12 J. O. Woodward, Sec. 16, 1 bbl. settled production, shot, Clinton, T.D. 3,165 ft.
Ward Township: Ohio Fuel Gas Co. 6-926 Sunday Creek Coal Co., NW Sec. 10, 524,000 cu. ft. gas, Berea, T.D. 1,159 ft.

Holmes County

Hardy Township: Bell Bros. 1 A. Armor, Sec. 14, 20,000 cu. ft. gas, Berea, T.D. 917 ft.

Licking County

Newark Township: Lacknette 1 William Lee, first quarter, 711,000 cu. ft. gas, Clinton, T.D. 2,571 ft.
Newton Township: Allen Willey 1 H. W. Gleekler, fourth quarter, 1,250,000 cu. ft. gas, Clinton T.D. 2,612 ft.

Medina County

Chatham Township: Preston L-6 D. A. Clapp, Tract 15, Lot 11, 5 bbl., Berea, T.D. 514 ft.
Preston R-6 D. A. Clapp, Tract 15, Lot 10, 5 bbl., Berea, T.D. 527 ft.
Preston H-9 J. F. Grigsby, Tract 15, Lot 11, 5 bbl., Berea, T.D. 503 ft.
Preston I-9 J. F. Grigsby, 5 bbl., Berea, T.D. 524 ft.
Preston R-9 J. F. Grigsby, 5 bbl., Berea, T.D. 508 ft.
Preston DO-5 D. A. Clapp, dry, Berea, T.D. 497 ft.
Preston 1 Will McVicker, Lot 10, dry, Berea, T.D. 361 ft.

Meigs County

Orange Township: Ohio Fuel 2 Gilbert Coen, Sec. 36, 1,250,000 cu. ft. gas, Cow Run, T.D. 861 ft.
Cooper et al 2 Barnett Bahr, Sec. 15, dry, Berea (water), T.D. 1,686 ft.

Morgan County

Marion Township: Williams Bros. 1 John Pierpont, Sec. 12, 4 bbl., Fossil sand 350-70 ft. (Maxon dry), T.D. 1,030 ft.
Jesse Williams et al 1 L. H. Geddes, SE Sec. 12, 4 bbl., Fossil, T.D. 370 ft.

Mercer County

Union Township: Wright Oil Co. 2 J. G. Gaverns near Elgin, 1 bbl., Trenton, T.D. 1,205 ft.

Muskingum County

Meigs Township: Columbus Clay & Mineral Co. 1 A. E. Harmon, Sec. 19, 17,000 cu. ft. gas, shot, did not improve, plugged, Clinton 4,559-87 ft., Medina missing, T.D. 4,685 ft.

Monroe County

Malaga Township: Peters & Huntsman 2 Glen Peters, Sec. 22, 50,000 cu. ft. gas, Berea, T.D. 2,064 ft.

Noble County

Beaver Township: Chaseville Oil Co. 3 C. P. Kronebitter, Sec. 3, 2 bbl., Berea, T.D. 1,579 ft.
Barnesville Dev. Co. 1 William Eagon, Sec. 23, dry, Berea, T.D. 1,610 ft.
Seneca Township: J. T. Watson 1 Mary Spence, Sec. 25, 40,000 cu. ft. gas, shot, Berea, T.D. 1,650 ft.

Perry County

Monroe Township: Hermey Bros. 23 David C. Hermey, NW Sec. 34, 4 bbl., Berea, T.D. 1,038 ft.
Pleasant Township: Allegheny Oil Co. 4 Paul Covate, NE Sec. 33, 3 bbl., Berea, T.D. 1,079 ft.

Seneca County

Big Spring Township: P. F. Rockett 1 Michael Rose, Sec. 12, dry, Trenton, T.D. 1,485 ft.

Stark County

Lake Township: C. W. White, estate 1 I. J. Werstler, Sec. 27, 1,600,000 cu. ft. gas, shot, Clinton, T.D. 4,572 ft.

Tuscarawas County

Fairfield Township: Brendel Prod. Co. 1 Boy Scouts of America, Sec. 6, 1,260,000 cu. ft. gas, shot, Clinton, T.D. 5,112 ft.

Vinton County

Elk Township: Keich Bros. 1 John C. Sampson, Sec. 20, 30,000 cu. ft. gas, Gordon, shot, T.D. 1,177 ft.

Washington County

Barlow Township: Baker et al 1 Luella Sims, Sec. 10, 300,000 cu. ft. gas, Squaw, T.D. 1,469 ft.
Anderson et al 6 A. W. Benson, Sec. 3, dry, Squaw, T.D. 1,540 ft.
Liberty Township: William Depuy 4 George Heldman, Sec. 1, 50,000 cu. ft. gas, shot, Berea, T.D. 1,825 ft.
Watertown Township: Waxler et al 1 James McDermott, Sec. 14, dry, Injun (water), T.D. 1,520 ft.

INDIANA

EVANSVILLE, Ind., Aug. 14.—Central States 1 Breeze, NW SW SW 19-6s-12w, Tar Springs discovery well southwest of production in the Caborn field, was reported cleaning out after shot late last week. Reliable information concerning the well's production has been unattainable so far but current reports state that, before the shot, the well swabbed 70 bbl. of oil a day, natural. Central States, meanwhile, have set casing to the Tar Springs at their 1 Seifert, NW 30-6n-12w, a new test south of 1 Breeze. In addition to the Tar Springs, 1 Seifert is also reported to have encountered a promising show in the Mansfield section.

Another Posey discovery, Cherry & Kidd et al 1 H. C. Ford, SE SW NW 34-4s-13w, proved somewhat disappointing last week. After an acid treatment in the McClosky, the well is reported making 30 bbl. a day on pump. Earlier in the week the well was reported swabbing 7½ bbl. an hour through casing.

Surface casing has been set for a new test in Lynn Township, Posey County, Whisenant & Trenchard 1 James Bundy. No. 1 Bundy is two locations west of Whisenant & Trenchard 1 Florence McFadden, recent Cypress sand discovery now pumping about 30 bbl. of oil daily.

A new wildcat test was started early last week in the northern part of Point Township, Posey County. The test, Nelson et al 1 M. Reichart, SE NW SE 25-7s-15w, is a west offset to a dry hole drilled recently by Harry Lewis on the Wolff farm. The area around 1 Reichart has been tested often in the past and several tests have set casing to promising shows, but none so far have proved commercial. No. 1 Reichart is about 1½ miles southwest of the New Haven pool of White County, Illinois.

INDIANA COMPLETIONS

Wildcats

Elkhart County: A. W. Downs 1 Garl estate, NE SW SE 11-38n-4e, dry at 655 ft.
Posey County: Joe Dawson et al 1 Aldrich, SE SW SE 36-5s-15w, dry at 3,105 ft., Ste. Genevieve 3,005 ft.
Spencer County: Goldsmith et al 1 Eisler, SW SE 6-7s-7w, location abandoned.

Fields

South Bufkin, Posey County: Rossi et al 1 Seifert, NW NW SE 19-6s-12w, pumped 36 bbl., 20-qt. shot 2,375-85 ft., T.D. 2,385 ft.
East Calvin, Posey County: Continental 10 Kleiderer A, SW NW NE 33-3s-14w, pumped 200 bbl., 3,000 gal. acid 2,882-95 ft., T.D. 2,896 ft.
Griffin, Gibson County: Papoose 19-A Cooper, SW SW SW 13-3s-14w, swabbed 205 bbl., 60-qt. shot 2,487-2,525 ft., T.D. 2,525 ft.
Hall-Edwards 26 Maier, NE NW NW 13-3s-14w, location abandoned.
Heusler, Posey County: Basin Drlg. 1 Heil, NW SW NE 12-7s-12w, dry at 1,934 ft., Menard 1,668 ft., Glen Dean 1,926 ft.
Hudsonville, Daviess County: R. D. Brown et al 3 McCracken, N½ NE NE 21-2n-6w, 300,000 cu. ft. of gas, 15-qt. shot 728-35 ft., Barlow 699 ft., gas 728-35 ft., T.D. 735 ft.
R. D. Brown, Inc., 1 Birch, S½ SE NW 21-2n-6w, dry at 757 ft., Barlow 694 ft., sand 712-50 ft., shale 750 ft.
St. Thomas, Knox County: Midwest Dev. 1 Schaller, SE SE SE 23-2n-11w, dry at 1,903 ft.
South Griffin, Gibson County: Continental 27 Keck, SW NE SE 27-3s-14w, pumped 50 bbl. oil and 36 bbl. water, whipstocked at 2,127 ft., 4½-in. liner 2,016-2,567 ft., cleaned out to 2,604 ft., T.D. 2,868 ft.
South Griffin, Posey County: Herndon Drlg. et al 1 Ford, SE NE NE 6-4s-13w, dry at 2,504 ft., Cypress 2,492 ft.
Cherry & Kidd et al 2 Gray, NE NW NW 2-4s-14w, pumped 110 bbl. oil and 3 bbl. water, natural, pay 2,832-57 ft., T.D. 2,857 ft.
Trenton, Decatur County: Hoosier Pub. Utilities 227 Tichener, NW NE 15-9n-9e, 185,000 cu. ft. gas, 140-qt. shot 880-911 ft., Trenton 872 ft., T.D. 911 ft.

INDIANA DRILLING REPORT

Crawford County: Reece-Dietz et al 1 Esarey, NE NW NE 36-3s-1w, S.D. 1,168 ft.
Daviess County: D. L. Norris et al 1 McAdams, NE SE SW 35-2n-5w, set 6-in. 60 ft., drilling 280 ft.
Hartman et al 1 White, SW NW SW 22-2n-7w, drilling 2,075 ft.
Swartzentruber et al 1 Beck, SE SW NE 8-2n-5w, drilling 610 ft.
Elkhart County: John H. McLean 1 Brandt, NW NW SW 30-37n-7w, Devonian 592 ft., water, S.D. 593 ft.
M. C. Fletcher 1 Baughn, NE SE SE 13-38n-4e, drilling 1,924 ft.
Gibson County: R. N. Sylvester 1 Potts, NW SW SE 24-1n-10w, drilling 1,208 ft.
R. D. Brown 1 Watts, SW SW NW 29-2s-12w, base Pennsylvanian 1,623 ft., T.D. 1,636 ft., running 10-in.
R. D. Brown 1 Bailey, NW NW SE 10-2s-9w, base Pennsylvanian 1,601 ft., Menard 1,615 ft., Glen Dean 1,881 ft., Barlow 2,056-66 ft., drilling 2,383 ft.
Schneider & Quinn 1 Schmidt, E½ SW SW 13-3s-9w, drilling 728 ft.
Greene County: Ohio Oil 1 O. P. Wells, N½ NW SE 2-7n-4w, drilling 677 ft.
Knox County: C. L. Wingate et al 1 Metropolitan Life, SW SW SE 27-1n-11w, first report, Glen Dean 1,663 ft., Ste. Genevieve 2,057 ft., St. Louis 2,202 ft., drilling 2,225 ft.
Newton County: Palmer Corp. 1 Henkle, SE SE SE 36-30n-9w, drilling 730 ft.
Orange County: U. S. Oil 1 Willyard, SW NW NE SW 33-1n-1w, drilling 968 ft.
Posey County: Brown et al 1 Reichert, SE NW SE 25-7s-15w, first report.
Central States 1 Seifert, NW NW NW 30-6s-12w, first report, 10-in. 85 ft., drilling 324 ft.
Chas. Loveless et al 1 Dauswan, NE NW NE 27-6s-13w, spud 85 ft.
Central States 1 Breeze, SW SW SW 19-6s-12w, T.D. 1,990 ft., swabbed 5 bbl. an hr., may shoot or drill deeper.
Venoble-Myles 1 Graulich, SW NE SW 13-7s-13w, S.D. 797 ft.
Spencer County: Goldsmith et al 1 Smith, SE SE SW 6-7s-7w, location, first report.
Goldsmith et al 1 Yeager, SW NE SE 6-7s-7w, first report, rig.

(Continued on Page 91)

New Pay Found at Halsell, Ross and Clingingsmith Pools

By R. MARNE SANFORD

WICHITA FALLS, Tex., Aug. 11.—As the week ended, new pay horizons were being indicated for the Ross-Caddo lime and the Halsell pools in Clay County and the Clingingsmith pool in Montague County.

The prospective producer for the Ross field is Continental Oil Co. 3 Ross, B. Walker Survey, a southeast edge deep test, which was contracted to the Ellenburger, Lower Ordovician. No shows were reported in the Ellenburger, topped at 5,766 ft., but a conglomerate above it, drilled from 5,616 to 5,678 ft., carried a good show of oil. The Caddo lime, which is the field's producing horizon, had a good show of oil and a stray section of the Strawn sand, found at 4,859-74 ft., showed for 650 ft. of oil and 250 ft. of salt water on a 30-minute drill-stem test.

At the end of the week, operator was cleaning out the hole, containing 1,000 ft. of oil after drilling plug from 7-in. casing cemented at 5,602 ft. Total depth is 5,846 ft., the deepest any test in the pool has drilled.

Shallow pay is being indicated for the Halsell pool of western Clay County at the Bridwell Oil Co. 8-A Halsell, northeast corner of Block 34, J. Rogers Survey, almost ½ mile northeast of production. Normally, production in the Halsell pool comes from a 4,700-ft. horizon in the Strawn sand section; however, at a total depth of 3,663 ft. in a shallower sand of the same formation, gas began to show on the slush pits. Operator ran a 30-minute drill-stem test from 3,654 to 3,663 ft. and recovered 1,170 ft. of oil and 225 ft. of oil-cut mud. Bottom-hole pressure gaged 1,550 lb. Casing is being set to test the shallow sand and the test might be completed if the prospect shows for sufficient production.

A new basal Strawn sand pay for the deep Clingingsmith pool of northwestern Montague County may be realized by the Sinclair Prairie 1 McCall, Block 150, Belcher subdivision, J. Olibarri Survey. The sand was topped at 5,305 ft. and drilled to 5,320 ft. A drill-stem test from 5,305 ft. to total depth recovered 150 ft. of oil and 100 ft. of muddy water. At last reports operator was coring deeper.

No. 1 McCall is a west offset to the discovery well completed last May by the same firm. Production was found in a conglomerate of Bend age, which was encountered from 6,119-31 ft., total depth.

Montague, Young and Clay Counties Share Wildcat Play

Four new wildcat tests were staked in this district during the week. Montague and Clay counties were given one each, and Young County two. All four will seek production below 4,000 ft.

Deep wildcat exploration in Montague County is steadily increasing. On a 4,000-acre tract assembled several months ago, J. B. Baldridge and associates are planning a 7,000-ft. test. Exact location of the wildcat has not been announced but the block is in the W. Wallace Survey and out of the L. Crenshaw ranch, northwest of Belcherville.

In Clay County pits have been dug for a scheduled 6,000-ft. rotary wildcat test to be drilled by L. T. Burns. The wildcat is located as 1 A. S. Hodges, 330 ft. from the south and 1,320 ft. from the west lines of Section 64, J. H. Belcher Survey.

The Kerlyn Oil Co. of Oklahoma City announced this week the location of two 4,400-ft. wildcat tests for the Loving area of western Young County. No. 1 G. O. Hazelton has been staked in the northwest corner of the southwest 69 acres of Block 1995, T.E.&L. Survey. It is ¼ mile east of the town of Loving.

One mile north of Loving, the same firm has staked 1 Eugenia Taylor, 660 ft. from the east and 990 ft. from the south lines of the northwest 160 acres of Block 2, B.S.&F. Survey A-2265, on a block assembled after the revival of leasing in Young County following the discovery of Mississippi lime pay.

SUMMARY OF COMPLETIONS

North Texas

	No.	Bbl.	Footage
Oil: Antelope	2	700	6,485
Hull-Silk	5	399	12,242
K.M.A.	8	1,468	28,179
Nocona	2	16	1,640
Other fields	2	193	6,083
Miscellaneous pools	9	775	12,621
Wildcats	1	20	1,137
Dry: Olney	5	.....	4,419
Other fields	2	.....	2,312
Miscellaneous pools	5	.....	5,689
Wildcats	6	.....	19,323
Total	47	.....	100,130

West Central Texas

	No.	Bbl.	Footage
Oil: Fields	3	381	6,628
Miscellaneous pools	1	6	829
Wildcats	1	350	3,600
Dry: Fields	2	.....	5,098
Wildcats	7	.....	16,982
Total	14	.....	33,137

NORTH TEXAS COMPLETIONS

Wildcats

Clay County: L. T. Burns 2 Wynn, Lot 34, H. Williams Sur. A-704, dry at 1,891 ft.
Shell 1 Scaling, Sec. 87, J. H. Belcher Sur., old well drilled deeper, dry at 6,268 ft.
George G. Golden 1 First Texas Joint Stock Land Bank B, Sec. 13, Thornberry subd., 20 bbl. in 24 hr., pumping natural, 1,123-37 ft.
Cooke County: C. J. Bohner 1 Wickliff, Israel Gable Sur. A-420, dry at 3,352 ft.
Denton County: D. S. Hager 1 Koenig, B. F. Perry Sur. A-1277, dry at 1,929 ft.
Throckmorton County: Helmerich & Payne 1 Howsley, Sec. 300, B.B.B.&C. Sur. A-1007, dry at 4,223 ft.
Wichita County: Akin, Dimock & Costley 1 Jackson, James Walker Sur. A-327, dry at 1,660 ft.

Fields

Antelope, Clay County: Shell 3 Henderson, 77 bbl. in 8 hr., 2-in. casing outlet, est. 150 bbl. daily, 3,197-3,220 ft., T.D. 3,256 ft., P.B. 3,237 ft.
Shell 3 Mullins, 288 bbl. in 8 hr., 2-in. casing outlet, est. 550 bbl. daily, 3,175-94 ft., T.D. 3,229 ft.
Hull-Silk, Archer County: Phillips 7 Little "Novella," 29 bbl. in 5 hr., pumping, est. 75 bbl. daily, 1,325-28 ft.
J. A. Chapman 5 Wilson, 129 bbl. in 24 hr., pumping natural, 3,786-95 ft., T.D. 3,803 ft.
Henry Grace 6 Wilson, 80 bbl. in 14 hr., pumping, est. 95 bbl. daily, 1,525-32 ft.
King Oil 27 Wilson "B," 10 bbl. in 24 hr., pumping, 1,518-24 ft., P.B. from 1,547 ft.
Southern Pet. 2 Wilson "A," 30 bbl. in 6 hr., 12/64-in. choke, est. 90 bbl. daily, 30-qt. shot, 4,016-32 ft.
Hutchinson 2 McCrory "B," dry at 1,556 ft.
K.M.A., Archer County: H. A. Schaeffer 6 Ferguson, 50 bbl. in 1½ hr., est. 125 bbl. daily, top K.M.A. 3,748 ft., pay 3,856-84 ft.
K.M.A., Wichita County: G. W. Cooper 58 Waggoner, 38 bbl. in 3 hr., ⅝-in. choke, est. 190 bbl. daily, top K.M.A. 3,723 ft., pay 3,834-84 ft.
Bishop Oil 2-D Waggoner, 65 bbl. in 3 hr., est. 175 bbl. daily, 4,000 gal. acid, 3,678-3,705 ft., T.D. 3,893 ft.
J. W. Carter 2 Roller, dry at 756 ft.
Buffalo Oil & Gas 5-E Ferguson, 108 bbl. in 3 hr., ½-in. choke, est. 325 bbl. daily, 3,000 gal. acid, 4,310-78 ft., T.D. 4,325 ft.
Buffalo Oil & Gas 13-E Ferguson, 36 bbl. in 1½ hr., ½-in. choke, est. 225 bbl., 4,000 gal. acid, top K.M.A. 3,665 ft., Ellenburger 4,210 ft., pay 4,230-50 ft., T.D. 4,326 ft.
Deep Oil Dev. Co. 2-E Bradley, 87 bbl. in 2 hr., ½-hr. choke, est. 275 bbl. daily, top Ellenburger 4,227 ft., pay 4,287-4,342 ft.
Perry Browning 2 Simpson, 65 bbl. in 24 hr., plus 10 per cent water, pumping, 1,755-66 ft.
Coppock & Coleman 12 Warren, 88 bbl. in 24 hr., pumping, 1,750-59 ft.
Nocona, Montague County: J. M. Hawley 10 Bouldin "Crow," 6 bbl. in 24 hr., pumping, 17-qt. shot, 815-25 ft.
Claymont Oil 3 Bouldin "Crow," 10 bbl. in 24 hr., pumping, 16-qt. shot, 808-15 ft.
Olney, Young County: Graham Royalty 3 Keen, dry at 907 ft.
Pemeta Oil 12 Swain, dry at 720 ft.
M. R. Stipe 1 Roach, dry at 1,034 ft.
P. C. Burns 1 Bloodworth, dry at 871 ft.
L. T. Burns 7 Larimore, dry at 887 ft.
Voth, Cooke County: Kingery Bros. Drlg. Co. 7 Trubenbach, 18 bbl. in 24 hr., pumping natural, 1,307-15 ft.
Walnut Bend, Cooke County: Sinclair Prairie 9 Ramsey, 81 bbl. in 6 hr., est. 175 bbl. daily, 4,737-68 ft.

Miscellaneous Pools

Archer County: Ted Norwood 1 Cross, dry at 1,439 ft.
Pet. Prod. 5 Griffith, 8 bbl. in 24 hr., 1,240-49 ft.
W. F. Palmer 1 Koester, dry at 1,157 ft.
Thomas A. Jirik 7 Tidwell, dry at 1,111 ft.
Clay County: Sussex Oil 3 Hamilton, 108 bbl. in 24 hr., pumping natural, 1,132-36 ft.
Sussex Oil 29 Glascoe, 88 bbl. in 24 hr., pumping, 1,071-81 ft.
Perkins & Cullum 1 Taylor "B," 18 bbl. in 4 hr., est. 75 bbl. daily, 1,048-60 ft.
Stayton Oil 11 McGregor, 43 bbl. in 24 hr., pumping natural, 1,166-94 ft.
George Graham 9 Hansord, 96 bbl. in 24 hr., pumping natural, 1,142-59 ft., T.D. 1,177 ft.
Cooke County: Trumter Pet. 14 Stacey "A," 20 bbl. in 24 hr., pumping natural, 751-65 ft.
Trumter Pet. 11 Stacey "B," 17 bbl. in 24 hr., pumping natural, 763-70 ft.
Wichita County: W. B. Omohundro 1 Ramming, dry at 1,302 ft.
G. W. Griffin 1 Baker, dry at 680 ft.
Young County: Walter H. Gant 1 Lowery, 300 bbl. in 22 hr., 1½-in. choke, est. 320 bbl. daily, top Caddo lime 3,716 ft., Marble Falls 4,176 ft., pay 4,176-89 ft.

Second Well Completed Between Sandy Ridge and Lewis-Steffens

FORT WORTH, Tex., Aug. 11.—Adding prestige to the so-called "link" area between the Lewis-Steffens and Sandy Ridge pools of east-central Jones County is the Butler & Horne and U. L. Miller 2 Lenderman, which is being completed from the sand at 1,916-34 ft. following a nitro shot. The test is a north offset to 1 Lenderman, W½ SE¼ Section 5, Block 15, T.&P. Survey, which was completed late in July for 240 bbl. daily to indicate a link between the two areas.

If 2 Lenderman is completed for a good daily potential and the Sandy Ridge Oil Corp. 3 McCreight, a west offset to 1 Lenderman, shows for production following a 50-qt. shot in the 1,900-ft. zone, this indication of a link between the two fields will be substantiated and a more active drilling campaign for the area can be expected.

Mills County Wildcat Shows Oil

In Mills County, the wildcat being drilled by Trigger Mountain Oil Co., 1 J. F. Burdett, 8 miles north of Goldthwaite, claimed attention this week with the report of an oil show from 2,647 to 2,660 ft. However, drilling continued unchanged past 2,755 ft. in the Marble Falls lime, which was topped at 2,720 ft. The wildcat test is located in Subdivision 59, Section 114, Hays C.S.L. Survey.

Wildcats Staked in Stephens And Coleman Counties

In Stephens County, west of Caddo, Helmerich & Payne of Tulsa have staked location for 1 Laura Smith, 660 ft. from the north and east lines of Section 1405, T.E.&L. Survey. Materials are being moved in for immediate drilling.

A scheduled 3,600-ft. wildcat, 3 miles east of Novice in Coleman County, has been staked by States Oil Corp. The test is 1 Mary Wilson, located 467 ft. from the north and east lines of a 160-acre lease in Section 115, C. O. Berry Survey.

Haskell County Gas Producer Completed

J. W. Crites has completed 1 Hendrick, J. Fenner Survey, for a daily potential of 13,000,000 cu. ft. This is one of the largest potentials ever gaged in the southern Haskell-northern Shackelford county district. The well is 1 mile northwest of the old Superior Oil Co. pool in southern Haskell County.

Production is from the Buff Creek sand from 1,476-89½ ft. Outlet for the new producer will be supplied by the Kittery Pipe Line Co. which has a 13-mile pipe line connecting with properties of Roeser & Pendleton, Inc., for repressuring purposes.

WEST CENTRAL TEXAS COMPLETIONS

Wildcats

Coleman County: States Oil 1 Sealy & Smith, Sec. 45, Blk. 2, G.H.&H. Sur., dry at 3,480 ft.
States Oil 1 Featherstone, M. J. Gable Sur. 118, 263 bbl. in 16 hr., est. 350 bbl. daily, oil sand 3,516-61 ft., 3,585-99 ft., T.D. 3,600 ft.
McMillan & Rominger 1 Wilkerson, Sec. 3, Blk. 2, G.H.&H. Sur., dry at 2,823 ft.
Palo Pinto County: Hickok & Reynolds 1 Halsell, Sec. 92, B.B.B.&C. Sur. A-105, dry at 4,630 ft.
Shackelford County: Eason Oil 1 Nail, Sec. 175, E.T. Sur., dry at 1,621 ft.
J. B. Young 1 Elliott, 1,470 ft. from S and 450 ft. from W lines Sec. 42, B.O.A. Sur., dry at 668 ft.

(Continued on Page 98)

Cement and Apache Activity Anticipates New Outlets

By ROBERT INGRAM

SOUTHWESTERN Oklahoma, particularly the Cement field in Caddo County, last week was being brought into the main pipe-line networks of the state and the area was assured a major part in the oil and gas development of the future. Oil pipe lines proposed or under way would more than triple the normal 7,000-bbl. daily average production from Cement field, and a natural-gas line planned by Cities Service Gas Co. would up the daily average gas output from about 20,000,000 cu. ft. a day to 110,000,000 cu. ft. (see p. 66).

The expansion of outlets was not unexpected, and operators had already started a drilling campaign which resulted in six new wells completed during July and three more during the first 2 weeks of August with 10 others drilling last week. Already the potential of the field is rated as high as 90,000 bbl. a day, with 338 wells producing, and the allowable was increased during July to 9,000 bbl. a day and will be upped for August to 12,500 bbl.

In the past, production has been held down on what amounted to a voluntary proration program based on the capacity of the Anderson-Prichard refinery at Cement, which was about 7,000 bbl. a day. This amount has been increased by a small plant at Cyril which has agreed to take 2,500 bbl. during August on the basis that what is not refined there can be sold as crude, probably to be moved by truck to the connection with an old Magnolia pipe line to Healdton and the south, and Anderson-Prichard is also increasing its purchase under a similar arrangement.

Most important single development for the field, however, was the plan of the Texas Co. to build a pipe line from its new field at Apache, west of Cement, which would provide an outlet for both Apache and Cement crude to the company's trunk line running north through Seminole. The Texas Co. was withholding definite announcement of its plans until production had been assured at Apache, since it was still attempting to complete the discovery well which blew out several weeks ago and finally had to be whipstocked (see drilling report below).

However, there was little doubt that Apache would be an important field; four wells were already drilling there—one by Sinclair Prairie Oil Co. and three by the Texas Co.—in addition to the discovery well. Gossip also had it that wildcats would be drilled on the Apache trend in 24-4n-11w, and 5-3n-10w, and 27-3n-9w, each being a small structure on the general high. The Sinclair Prairie test, 1 Lewis, NE NE SW 2-5-12w, also caused considerable comment when it had a minor blow out at a 400-ft. zone some weeks ago. The gas, however, was believed to be coming from a channel from the Texas 2 Smith discovery well.

Water Defines Guthrie Pool At West Flank Test

The Guthrie pool of northeastern Logan County was defined on the west when the Sunray Oil et al 1 McLeod swabbed salt water with only a scum of oil.

Located in NE NE SE 12-17n-2w, one location west of the McBride 3 Eastwood producer, the well was drilled and cored to 5,505 ft. in the second sand. It was to be plugged back and pipe perforated in the Bartlesville sand which showed saturation in cuttings and a core.

Meantime, a townsite play at Guthrie, capital city of Logan County, and scene of one of the state's newest Wilcox sand pools, was expected after the operators completed leasing of a huge townsite block and prepared to stake location.

Harry A. Miller of Edmond and others announced the new location as 1 Katschor, at 660 ft. from the west and 330 ft. from the south of the C 7-16n-2w, on the western edge of the Guthrie townsite.

Olson Drilling Co. of Tulsa has the contract for the wildcat which will seek production in the Wilcox sand.

Miller, it was said, has completed leasing of a solid block which extends from the extreme western edge of the city to the eastern limits, paying $5 per lot, and including some 3 miles of land.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Cement	2	1,083	6,866
East Cromwell	2	648	7,702
Guthrie	2	851	10,959
West Hewitt	2	918	4,402
Oklahoma City	2	653	13,094
East Stroud	2	33	5,736
Other fields	14	533	31,049
Wildcats	1	24	2,850
Gas wells: Fields	3	*9.3	6,380
Dry holes: Fields	6	.....	6,075
Wildcats	7	.....	29,614
Total	43	....	124,727
Recompletions	3	33	.....

*Million cu. ft.

Acid Treatment Effective At South Dill Test

Treatment with acid last week increased greatly the oil production from Shell Oil Co., Inc., 1 Kinslow, NE NE SW 22-11-8, in the South Dill pool of Seminole County. The well, which previously had swabbed 3½ bbl. of oil and 4½ bbl. of water in 6 hours from the Hunton, topped at 4,095 ft., total depth 4,210 ft. with base of Hunton at 4,208 ft., was perforated opposite the Hunton and treated with 2,000 gal. of acid. It swabbed for 8 hours and then began to flow into tanks an estimated 15 bbl. of oil an hour, cutting an estimated 15 per cent water.

The Kinslow is a southwest offset to the Shell 1 Keyes B, discovery well in the pool, which made 851 bbl. of oil in 21 hours after perforating opposite the Hunton.

Shell 1 Pure, NW NW SE 22-11-8, is drilling at 1,660 ft.

OKLAHOMA COMPLETIONS

Wildcats

Joe Josephson 1 McCurry ..... SW NW 15-4-6 Pumped 24 bbl. oil and 24 bbl. water, pay 851-61 ft., shot, 5-in. 840 ft., Viola 2,793 ft., T.D. 2,850 ft., P.B. 873 ft., *pool opener*, Pontotoc County.

B. L. Fain 1 Owens ..... NE SE 7-5s-8w Dry, T.D. 2,202 ft, Jefferson County.

Big Chief 1 Earhart ..... NE NE SW 5-9-4 Dry, T.D. 5,264 ft., Wilcox 5,240 ft., Pottawatomie County.

Crawford 1 Buck ..... SW NE 20-9-10 Dry, T.D. 3,400 ft., Cromwell 3,310 ft., 5½-in. 2,634 ft., 250,000 cu. ft. gas 1,410-18 ft., Hughes County.

Wilcox 1 Moseley-Nevins ..... SE SE NW 4-13-7 Dry, T.D. 3,580 ft., Brown lime 3,369 ft., Dutcher 3,527 ft., Okfuskee County.

Dunnett 1 Brown ..... NW NW SW 17-15-4 Dry, T.D. 5,080 ft., second Wilcox 5,035 ft., Lincoln County.

Olson 1 Faulk ..... N½ NE SE 33-18-3w Dry, T.D. 6,417 ft, second Wilcox 6,393-6,417 ft., Logan County.

Zephyr 1 Gingerich ..... SW SW SE 29-28-1w Dry, T.D. 3,681 ft., second Simpson sand 3,586 ft., Arbuckle 3,644-81 ft., Kay County.

Fields

West Arno, Creek County: Bryan Pet. 2 Stephney, SW NW NW 35-14-7, 4,250,000 cu. ft. gas, R.P. 1,350 lb., pay 3,098-3,120 ft., shot, Viola 3,922 ft., 5-in. 3,093 ft., T.D. 3,987 ft., P.B. 3,125 ft.

Cement, Caddo County: George Pace 1-A Walker, NE SW NE 1-5-10w, swabbed and flowed 97 bbl. in 4 hr., potential 585 bbl., sand 3,393 ft., 5-in. 3,406 ft., T.D. 3,406 ft.

Beetcher 1-A Davis, SE NE NE 1-5-10w, swabbed and flowed 83 bbl. in 4 hr., potential 498 bbl., Noble-Olson sand 3,279-87 ft. and 3,291-3,300 ft., Rowe sand 3,383-3,406 ft., 4½-in. 3,441 ft., perf. 3,385-3,405 ft., T.D. 3,460 ft.

East Cromwell, Okfuskee County: Titus 2 Replogle, SW SE NE 26-11-8, swabbed 100 bbl., Cromwell 3,476 ft., 5-in. 3,478 ft., shot on bottom, T.D. 3,490 ft.

Shell 1 Van Pelt, NW NE NW 35-11-8, flowed 548 bbl., Hunton 3,993-4,020 ft., T.D. 4,212 ft., P.B. 4,087 ft.

Guthrie, Logan County: Continental 3 Donoghue-A, SW NE SW 7-17-1w, flowed 312 bbl. in 16 hr. through ¾-in. choke on tubing, second Wilcox 5,478-81 ft., 6-in. 5,476 ft., T.D. 5,503 ft.

Sinclair 2 Sult, SE SW NE 7-17-1w, flowed 529 bbl., second Wilcox 5,439-56 ft., 7-in. 5,439 ft., T.D. 5,456 ft.

West Hewitt, Carter County: Kyle 6 Dougherty, SE SW SW 17-4s-2w, flowed 357 bbl. through tubing, sand 2,141-2,232 ft., 7-in. 2,141 ft., T.D. 2,232 ft.

Tide Water 5 Ward, NE SE NE 19-4s-2w, flowed 561 bbl. through tubing, sand 2,117-30 ft., 7-in. 2,117 ft., T.D. 2,170 ft.

Knox, Grady County: Ray 1-A Patterson, SE SW SE 21-3-5w, flowed 20 bbl. by heads, shot 2,321-56 ft., 7-in. 2,308 ft., T.D. 2,403 ft.

South Konawa, Seminole County: Case 2 Swan-B, SW NE SW 3-5-5, pumped 175 bbl. in 16 hr., Hunton 2,496 ft., 7-in. 2,538 ft., Sylvan 2,661 ft., acid, T.D. 2,662 ft.

Mason, Okfuskee County: Texas 1 Fixico, S½ SW NW 15-12-9, flowed 46 bbl., Wapanucka 3,330 ft., 5-in. 3,336 ft., T.D. 3,360 ft.

Okemah district, Okfuskee County: Keener 1 Walker, NW SE SE 36-12-9, location abandoned.

Oklahoma City, Oklahoma County: Big Chief 1 McManus, SW SE SW 22-12-3w, pumped 350 bbl., Wilcox 6,455 ft., 8-in. 6,419 ft., shot 6,457-6,538 ft., T.D. 6,538 ft.

Sunray 15 State, SW NE NW 27-12-3w, pumped 303 bbl., Wilcox 6,464 ft., shot 6,541-56 ft., T.D. 6,556 ft.

East Stroud, Creek County: Devonian 3 Hamilton, NW NW NE 5-14-7, pumped 30 bbl., Prue 2,791-2,832 ft., lime 2,832 ft., shot 2,795-2,830 ft., T.D. 2,833 ft.

Shell 3 Bunyard, SW NE SE 31-15-7, 3 bbl., Prue 2,861-66 ft., T.D. 2,903 ft.

Tussy, Carter County: Samedan 1 McCrory, SW NE SE 5-1s-3w, 27 bbl., pay 2,785-2,811 ft. and 2,885-92 ft., T.D. 3,044 ft.

Weleetka, Okfuskee County: Doak 6 Lowe, SW SE NE 16-10-11, pumped 10 bbl., Booch 2,076-85 ft., 5-in. 2,076 ft., shot 2,077-84 ft., T.D. 2,089 ft.

West Weleetka, Okfuskee County: Summit 3 Hildebrand, NE SE SW 18-10-11, flowed 135 bbl. in 8 hr., Booch sand 2,188-95 ft., 8-in. 1,478 ft., T.D. 2,195 ft.

Miscellaneous

Creek County: Curtis 4 Larremore, NW SW NW 10-19-9, pumped 31 bbl., Skinner 2,088-99 ft., T.D. 2,106 ft.

L. B. Jackson 2 Bruce, SE NE SE 4-17-9, pumped 8 bbl., Prue 2,025-58 ft., 5-in. 2,014 ft., shot 2,035-57 ft., T.D. 2,058 ft.

Muskogee County: Link 4 Mathews, NE SE NE 19-15-15, 1,000,000 cu. ft. gas, Dutcher 1,427-48 ft., T.D. 1,471 ft.

Okmulgee County: Pine 1 Bingman, SE SE SE 18-13-14, dry, T.D. 490 ft.

Misener 7 Love, SE SE NE 16-14-14, 2 bbl., Booch 1,154-64 ft., T.D. 1,177 ft.

Osage County: E. O. Platter 3 Osage, SW SE NE 29-22-9, 12 bbl., sand 2,652-2,706 ft., T.D. 2,710 ft.

Pettigrew 1 Osage, SE NE SW 11-23-11, 10 bbl., Bartlesville 1,521-70 ft., T.D. 1,570 ft.

Barnsdall 10 Osage, SE NW SE 11-24-10, 10 bbl., Bartlesville 1,882-1,935 ft., T.D. 1,935 ft.

Oliphant 2 Osage, SE SE NW 11-24-10, 40 bbl., Bartlesville 1,835 ft., T.D. 1,892 ft.

I.T.I.O. 480 Osage, SW NE SE 24-25-11, dry, T.D. 1,824 ft.

Pontotoc County: Norville 1 Luce, SE SE 23-5-6, pumped 7 bbl. oil and 5 bbl. water, sand 1,830-48 ft., 5-in. 1,830 ft., shot 1,832-46 ft., T.D. 1,893 ft.

Henry 1-A Brown, SE NE 17-4-8, dry, T.D. 863 ft., sand 541-46 ft., show oil.

Tulsa County: Lambert 2-A Fitzgerald, SE SE 9-19-14, dry, T.D. 1,836 ft.

Wagoner County: Mullins 3 Lyons, NW SW SW 21-18-17, dry, T.D. 392 ft.

Grim 1 Henry Day, S½ SW NE 30-18-18, dry, T.D. 670 ft.

James Petroleum 4 Robson, SW NE NW 21-19-15, 4,000,000 cu. ft. gas, sand 908-16 ft., T.D. 922 ft.

WILDCAT DRILLING REPORT

Panhandle

Beaver County: Laughlin 1 fee, W½ SE 13-6n-21ecm, dolomite 2,652 ft., 8-in. 2,652 ft., T.D. 2,664 ft.

Southwestern

Atoka County: Campbell 1-A Rich, SE SW 2-1-12, 8-in. 440 ft., drilling 509 ft.

Matson 2 Rowland, SW NE NE 18-3s-10e, S.D. 705 ft.

Beckham County: H. C. McLaughlin 1 Stain, SW SW 25-8-25w, granite wash 2,211 ft., drilling 2,225 ft.

Bryan County: Sinclair Prairie 1 Irwin, SW SE SE 18-6s-12e, rig on grounds for 6,000-ft. test.

Caddo County: Texas 2 Smith, SE NW 2-5-12w, D.S. test 3,388 ft., flowed 125 bbl. in 55 min. from Simpson bromide, blew out between 7-in. and 13⅜-in. casing from Hunton, est. 25,000,000 cu. ft. gas, gas killed, lost swedge and milling tools in hole at 2,218 ft., set whipstock 1,973 ft., drilling new hole at 2,304 ft. in Sylvan.

Denver 1 Sah-cam, SE SE 33-10-10w, to deepen, old T.D. 10,084 ft.

Cleveland County: Sinclair Prairie 1 Craig, NE NE SE 30-8-1w, second Wilcox 7,625 ft., T.D. 7,636 ft., cored 7,620-36 ft., recovered sand with stain and odor, bottom 2 ft. bleeding in spots, 7-in. 7,629 ft., perf. 6,719-23 ft., 7,000 ft. salt water over night, squeezed 50 sacks, P.B. 7,540 ft., perf. 7,455-7,500 ft., D.S. test 7,440-7,500 ft., some show gas and 2,000 ft. drilling mud and 3,300 ft. salt water, to squeeze.

Delaney 1 Bandy, NW SE SW 13-7-2w, Woodford 6,920 ft., drilling 6,942 ft.

Comanche County: William Atkinson 1 State, SW SW SW 16-2-9w, drilling 1,251 ft., sandy shale.

Garvin County: Doley & Ramsey 1 McCrummem, E½ SE NW 24-4-1w, dense lime 4,111 ft., dolomite with stain 4,220-40 ft. and 4,340-60 ft., green shale 4,365-4,403 ft., cored gray porous sand and gray shale, odor gas, and dense Simpson lime 4,406-18 ft., drilling 4,434 ft.

Jackson County: Rhinehart & Donovan 1 Petzold, SE SE NE 20-3-20w, drilling 1,772 ft.

Jefferson County: Danciger 1 McClain, NW NW NE 4-4s-4w, drilling shale and shells 1,825 ft.

Johnston County: Baldwin & Reed 1 Davis, S½ SW NW 8-2s-8e, show oil in Viola 1,640-50 ft., Bromide

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1,900 ft., sand 2,570-76 ft., P.B. 1,750 ft., reset 7-in. at 1,635 ft., to acidize Viola.

Kiowa County: Kelly Wells 1-A Oster, SW NE NW 33-7-17w, drilling sandy shale 1,017 ft.

Hughes 1 Dugger, NE SW SW 14-6-18w, S.D. contract depth 1,600 ft. in shaly conglomerate.

Badger & Grover 1 Clark, SW SW NE 19-7-16w, drilling 1,313 ft. in Woodford shale.

Love County: Magnolia 1 Wilson, SW SE NW 12-7s-2e, lime 4,308-4,478 ft., cored brown lime 4,478-80 ft., drilling 4,496 ft.

Batson 1 Walden, NE NW NW 34-6s-2e, T.D. 2,703 ft., 7-in. 2,169 ft., Viola 2,425-75 ft., perf. 1,741-53 ft., squeezed 100 sacks, run tubing with packer at 2,150 ft., acid, swabbing 2 bbl. an hr., T.D. 2,595 ft., rigging machine.

Joe Baldwin 1 Hill, NW NW SE 26-8s-2e, S.D. 5,510 ft.

Stephens County: E. R. Perkins 1 State, NE NE NW 16-3s-8w, drilling 345 ft.

North and Central

Creek County: Cole 1 Citizens Bank, NW NW SE 25-14-10, T.D. 2,210 ft.

Charles Balph 1 Starr, SE SE SW 7-15-8, Cromwell zone 3,320 ft., Viola 3,735 ft., dense 3,762 ft., dolomite 3,767 ft., first Wilcox 3,765-70 ft., show oil, second Wilcox 3,792-3,800 ft., cored hard dolomite 3,786-94 ft., cored hard sand and fairly porous well-stained sand 3,794-3,801 ft., electrical log, 5½-in. 3,750 ft., drilled plug, 3,400 ft. oil in hole, swabbed 103 bbl. in 12 hr., testing.

Grant County: Champlin 1-A Crouse, S½ SE SW 29-25-8w, drilling 5,520 ft.

Texas Co. 1 Brenholt, E½ NW SW 36-25-3w, first report.

Lincoln County: Allied Materials 1 Hicks, NW NW NW 25-13-6, first Wilcox 4,272 ft., second Wilcox 4,299 ft., cored white salty sand 4,306-12 ft., electrical log, 6-in. 4,306 ft., perf. 4,219-47 ft., acid, gaged 431,000 cu. ft. gas with some show oil, 1,575 lb. R.P., squeezed, P.B. 4,183 ft., perf. 4,076-4,129 ft. in Hunton, gaged 896,000 cu. ft. gas, 1,600 lb. R.P., to acidize.

Dunnett 1 Luckenbill, SW SE SE 29-15-5, Oswego 3,475 ft., Prue 3,504 ft., show oil, 7-in. 3,502 ft., est. 60-65 bbl. a day, T.D. 3,548 ft., filled up 1,200 ft. oil in hole, natural, shot 3,520-45 ft., cleaned out with 1,800 ft. oil in hole, deepened to 3,550 ft., water, P.B. 3,548 ft., flowed 40 bbl. oil in 15 hr. by heads through tubing, flowed 35 bbl. a day and trace water.

Thomas A. Creekmore 1 Tipton, NW NW SW 23-15-5, cored shale 3,400-19 ft., cored shale and lime streak 3,455-73 ft., Verdigris 3,464 ft., T.D. 3,505 ft., electrical log, P.B. 3,458 ft., 7-in. 3,420 ft., some show oil, to shoot.

Mid-Continent 1 Evans Land, SW SE NW 31-14-6, first report.

Logan County: Roy Deihl 1 Lesh, NE NE NE 19-16-1w, Pawhuska 2,500 ft., Deer Creek 2,705 ft., Avant 3,755 ft., drilling 3,835 ft.

Deep Rock 1 Murphy, NW NW SE 11-17-2w, first report.

Noble County: Elm Oil 1 Hicks, SE SE SW 36-23-2w, T.D. 4,650 ft., stuck pipe, acidized, fishing.

Okfuskee County: Shell 1 Palmer, SW NW SW 6-10-9, second Wilcox 4,185 ft., D.S. test 3,905-4,012 ft., recovered 360 ft. oil and gas-cut mud, T.D. 4,215 ft., 4½-in. 4,185 ft., swabbed 13 bbl. water in 9 hr., P.B. 4,133 ft., swabbed and bailed dry, perf. in Hunton 4,005-10 ft., 1,000 ft. water in 2 hr., swabbed 33 bbl. water in 3 hr., squeezed 100 sacks.

Shell 1 Heffner, SE NW NE 17-11-9e, drilling 2,816 ft.

W. C. McBride 1 Long, SE SE SW 17-12-10, drilling 800 ft.

Dave Malernee 1 Beard, SE SW NE 7-11-8, drilling 2,550 ft.

Osage County: Black Jack 1 Osage, NE NE SW 29-25-7, S.D. 2,000 ft.

Devonian 1-A Osage, SW SW NE 34-22-7, 10-in. 1,223 ft., Layton 1,645 ft., show gas 1,680-1,748 ft., Cleveland 1,918 ft., drilling 2,008 ft.

Swartz 3-A Osage, SW SW NE 16-23-9, 6-in. 1,589 ft., Oswego 1,798-1,873 ft., Bartlesville 2,156 ft., T.D. 2,170 ft., filled up 160 ft. oil, natural, est. 6 bbl. natural, flowed 2½ bbl. oil by heads, then swabbed 12½ bbl. in 6 hr., to shoot.

Anderson-Prichard 14 Osage, SW NE SW 32-28-8, Oswego 2,160 ft., Mississippian lime 2,473 ft., standard tools.

Payne County: Atlantic 1 O'Hara, W½ NE NW 18-17-2, first report.

Pontotoc County: Hughes-Thomas 1 Johnson, SW SW SE 26-4-5, Wewoka sand 951-73 ft., cored 953-54 ft., 962-74 ft., and 1,081-89 ft., top sand 1,079-81 ft., sandy shale 1,089-1,150 ft., sand 1,118-20 ft., show oil and gas, sand 1,220 ft., stain and odor. Wapanucka 1,260-70 ft., cored 1,365-75 ft., T.D. 1,604 ft., electrical log, S.D.

Mid-Continent 1 Wilson, SE SE NE 26-4-5, drilling 70 ft.

Pottawatomie County: Stanolind-Amerada 1 Rowan, NE NW SW 20-9-4, first Wilcox 5,014 ft., electrical log, 5½-in. 4,836 ft., P.B. 4,812 ft., perf. 4,752-58 ft., 4,000 ft. saturated mud in hole, squeezed, P.B. 4,749 ft., perf. 4,697-4,720 ft., bailed 2 bbl. oil, drilled out 4,775 ft.

Meyers 1 Johnson, NE SE NE 34-10-3, cored 5,302-08 ft., no show, S.D. 5,308 ft.

J. F. Smith et al 1 Krouch, SW NW NE 11-7-3, Belle City 2,485 ft., Hogshooter 2,880 ft., Checkerboard 3,230 ft., drilling 3,810 ft.

Arab Petroleum 1 Trausdale, NE NE NW 31-7-3, first report.

Seminole County: Moday Drilling 1 Whitney, NE NE SE 30-7-7, basal Wewoka 1,507 ft., Calvin 1,658 ft., drilling 2,004 ft.

Hall-Jordan 1 Jennings, SE SE 8-8-8, Caney 3,400 ft., Woodford 3,930 ft., Hunton 3,965 ft., Viola 4,192 ft., dense 4,199 ft., dolomite 4,233 ft., first Wilcox 4,279 ft., cored 4,057-67 ft., light stain, cored 4,281-85 ft., spotted saturation, electrical log.

Deep Rock 1 Work, NE NE NE 20-8-8, Calvin 1,310-50 ft., lower Calvin 1,370-1,420 ft., Senora sand 1,830 ft., drilling 2,120 ft.

Tate 1-B Fleets-Osborn, SE SW NE 11-6-7, Calvin 1,474 ft., cored sand, stained and bleeding in spots, good odor, 1,476-81 ft., T.D. 1,481 ft., 5-in. 1,474 ft., swabbed 2 bbl. oil and 4 bbl. water an hr., drilled deeper to 1,485 ft., testing.

R. W. Simpson 1 Reed, NW NW SW 13-6-6, first report.

Donmar Oil 1 Smith, SE SE NE 29-8-6, first report.

Ellenburger Lime Producer Opens Third Zone at Abell

By R. MARNE SANFORD

MIDLAND, Tex., Aug. 11.—The prolific Ellenburger lime, Lower Ordovician, same producing formation as at the new pool opened a week ago by Amerada Petroleum Corp. in Reagan County, has been found productive by the Magnolia Petroleum Co. 1 J. F. McKee to provide the third pay level for the Abell pool of northern Pecos County. The producer was completed at a total depth of 5,940 ft., with pay from 5,914-40 ft. to pump 62 bbl. of 40.6-gravity oil and 54 bbl. of water daily.

Up to the present time production in the Abell pool has been from upper and lower Simpson sands, Middle Ordovician in age. There is the possibility that a fourth pay for the upper part of the pool may be found in the Permian lime. Stanolind Oil & Gas Co. in July opened a new pool just 4 miles east of the south end of the Abell pool. The discovery well, 1 Conry-Davis, flowed 346 bbl. of oil from the Permian lime at 3,710-3,810 ft. A systematic investigation of the Permian in the Abell sector can be expected in the future. No. 1 McKee is located in Lot 13, Section 25, Block 9, H.&G.N. Survey.

One and one-half miles northeast of the Abell pool discovery well, Stanolind Oil & Gas Co. has taken over the Eastland Oil 1 Simmons after it failed to show for production from the Permian lime. The test, located in Section 26, Block 9, H.&G.N. Survey, is now showing heavy gas flow. On a 6-minute drill-stem test from 4,923 to 2,980 ft. it recovered 6,360,000 cu. ft. of gas along with gas-cut mud and 5 gal. of distillate. At last reports operator was coring below 4,991 ft. to test again.

Crockett Field Is Extended ½ Mile Northeast

Flowing 171.87 bbl. of 28-gravity oil in 24 hours through ⅛-in. tubing choke, natural, the A. E. Lynch 1 Skelly-University this week extended the Crockett field of northern Crockett County ½ mile northeast and at the same time became the prize producer for the pool. No. 1 Skelly-University logged the upper pay from 1,425-27 ft. and lower pay from 1,454-55 ft. However, oil from the 1,459-60-ft. level showed 25 per cent sulfur water and as a result the hole was plugged back from 1,460 to 1,453 ft., shutting off all the lower pay.

Location is 330 ft. out of the southwest corner of Section 12, Block 14, University Lands Survey on a Skelly farmout of the SW¼ of the section.

Another field extension was seen this week when the Forest Development Corp. completed 1 W. B. Henderson, Section 3, Block 45, Township 3s, T.&P. Survey, for 176 bbl. daily to extend the Foster pool of Ector County 1 mile to the southwest. The well is bottomed at 4,366 ft.

Pecos County Wildcat Shows for Production

Considerable excitement was created during the week when the Anderson-Prichard 1 Boren, Section 4, Block 605, L. Merchant Survey, 2 miles southwest of the Apco field of northern Pecos County, reported shows in the Ellenburger lime. Indicating a new pool or at least a 2-mile extension to the Apco pool, 1 Boren topped the Ellenburger lime section at 4,490 ft. and found the main pay from 4,686 to 4,804 ft., total depth. At the end of the week operator was bailing out before gun perforating 5½-in. casing.

Reagan County Pool Opener to Be Deepened

Deepening operations are in order for the Amerada Petroleum Corp. 1-RA University, which just last week opened the second Ordovician pool in Reagan County. The decision to deepen the well was reached after a 24-hour gage showed that the well was only flowing 95 bbl. through 12/64-in. tubing choke. Pay is from 9,017 to 9,050 ft. As the week closed, 1-RA University, Section 3, Block 48, University Lands Survey, was drilling below 9,111 ft. in hard dolomite. A week ago it flowed at the rate of 1,000 bbl. daily.

SUMMARY OF COMPLETIONS

Southern West Texas

	No.	Bbl.	Footage
Oil: Abell	2	258	11,674
Cowden	2	847	6,015
Johnson	5	4,748	20,182
North Cowden	2	620	8,738
Other fields	11	5,968	33,762
Dry: Wildcats	1	.....	4,820
Total	23	.....	85,191

Northern West Texas

	No.	Bbl.	Footage
Oil: Slaughter	10	12,422	50,167
Wasson	4	2,650	20,800
Other fields	2	1,143	9,536
Dry: Wildcats	2	.....	10,397
Total	18	.....	90,900

Texas Panhandle

	No.	Bbl.	Footage
Oil wells: Gray County	5	1,169	15,796
Hutchinson County	7	1,227	24,471
Wheeler County	1	150	1,996
Gas wells: Carson County	1	*35.5	2,320
Total	14	.....	45,583

Southeast New Mexico

	No.	Bbl.	Footage
Oil wells	4	495	16,031
Dry holes	3	.....	8,565
Total	7	.....	24,596

*Million cu. ft.

SOUTHERN WEST TEXAS COMPLETIONS

(24-hr. ratings based on last 3 hr. of 6-hr. gage)

Wildcats

Loving County: H. C. McCawley 1 Hall, 467 ft. from SW and SE lines Sec. 60, Blk. 1, W.&N.W. Sur., dry at 4,820 ft.

Fields

Abell, Pecos County: Magnolia 3 Crockett, 196 bbl. oil and 49 bbl. water, ½-in. choke, 1,500 gal. acid, perf. casing 5,711-34 ft., P.B. from 5,991 ft.

Magnolia 1 McKee, 62 bbl. oil and 54 bbl. water, 1,500 gal. acid, 5,914-32 ft., T.D. 5,940 ft.

Cowden, Winkler County: C. V. Lyman 3-A Cowden, 609 bbl., 1-in. choke, 400-qt. shot, 2,760-3,035 ft.

Texas 1-B Cowden, 238 bbl., 660-qt. shot, 2,800-2,980 ft.

Crockett, Crockett County: Lynch Oil 1 University, 172 bbl., ⅛-in. choke, 1,425-53 ft., P.B. 1,460 ft.

Dunes, Crane County: Texas 7-D University, 1,618 bbl., natural, 3,435-3,574 ft.

Foster, Ector County: Forest Dev. Co. 6-H Moss, 411 bbl., 405-qt. shot, 4,.35-4,180 ft., T.D. 4,235 ft.

Goldsmith, Ector County: Gulf Oil 362 Goldsmith, 2,150 bbl., 4,000 gal. acid, 4,149-4,239 ft.

Hutchins, Ward County: Gulf Oil 159 Hutchins, 210 bbl., 875-qt. shot, 2,615-3,065 ft., T.D. 3,075 ft.

Johnson, Ector County: Atlantic Refg. 7-E Johnson, 970 bbl., 460-qt. shot, 4,116-4,237 ft.

Sinclair Prairie 5-B Johnson, 438 bbl., 200-qt. shot, 4,147-97 ft., 240-qt. shot, 4,155-4,205 ft., T.D. 4,235 ft.

Sinclair Prairie 12-C Johnson, 1,310 bbl., 300-qt. shot, 4,082-4,150 ft., T.D. 4,182 ft.

Sinclair Prairie 10-E Johnson, 1,593 bbl., 3,000 gal. acid, 4,065-4,150 ft., T.D. 4,177 ft.

Sinclair Prairie 2 Palmer, 437 bbl., 200-qt. shot, 4,154-4,206 ft., P.B. from 4,251 ft.

Keystone, Winkler County: Parker Drlg. 1 Ward, 250 bbl., ½-in. choke, 500-qt. shot, 3,089-3,295 ft.

Lehn, Pecos County: Burk Royalty 1-C Sullivan, 112 bbl., ¼-in. choke, 40-qt. shot 1,700-12 ft.

McCamey, Upton County: George E. Farley 1 Damron, 138 bbl. oil and 13 bbl. water, 750-qt. shot, 3,040-3,200 ft., P.B. from 3,245 ft.

McElroy, Crane County: Gulf 70 McElroy, old well drilled deeper, old T.D. 2,945 ft., 140 bbl., pumping 2,822-2,984 ft.

Noelke, Crockett County: Atkins & Pittman 1-E Noelke, 188 bbl. in 1 hr., 3-in. casing outlet, 1,518-43 ft.

North Cowden, Ector County: M. A. Grisham 1 Henderson, 531 bbl., 770-qt. shot, 4,123-4,360 ft.

Stanolind and Delaney 3-B Smith, 89 bbl., ¾-in. choke, natural, 4,200-4,378 ft.

Sand Hills Permian, Crane County: Humble 57 Tubb 476 bbl., 24/64-in. choke, 4,000 gal. acid, 4,270-4,400 ft.

SOUTHERN WEST TEXAS ACTIVE WILDCATS

Brewster County: Chester Dewey 1 Decie, 660 ft. from N and 1,980 ft. from S lines Sec. 45, Blk. 4, G.C. &S.F. Sur., 3,000-ft. test, cementing crevice at 185 ft.

Crane County: Gulf Oil 1-B Tubb, 660 ft. from W and S lines Sec. 28, Blk. B-27, P.S.L. Sur., drilling 3,292 ft.

Crockett County: Bolsa Chico Oil 1 Bouscaren, 330 ft. from E and 624 ft. from S lines, Sec. 57, Blk. GG, T.C. Sur., still testing at 1,281 ft.

R. H. Henderson 1 Couch, 467 ft. from N and 2,173 ft. from E lines Sec. 37, Blk. GG, H.E.&W.T. Sur., drilling 1,575 ft.

Forest Dev. 1 Shannon, 467 ft. from W and S lines Lot 20, Lge. 2, Archer Co. Sch. Lds. Sur., 2,600-ft. test, drilling below 583 ft.

J. S. Pittman 1 O .W. Parker, 467 ft. from W and S lines of Sec. 28, Blk. HH, G.C.&S.F. Sur., location.

Amerada 1-C Todd, 660 ft. from W and S lines Sec. 15, Blk. 10, G.C.&S.F. Sur., drilling below 980 ft.

E. S. Hitchcock 1-A Noelke, 467 ft. SW and NW NE¼ Sec. 1949, Blk. 31, Steisser Sur., location.

E. S. Hitchcock 1-B Noelke, 467 ft. NW and NE SW¼ Sec. 1950, Blk. 31, Steisser Sur., location.

Moore & Olson 1 Halff, 1,200 ft. from S and 4,900 ft. from E lines Sec. 54, Blk. 1, I.&G.N. Sur., drilling 3,032 ft.

Bolsa Chico Oil 1 Shannon, 330 ft. from W and S lines SW¼ S½ Sec. 27, Blk. GG, M. T. Willon Sur., first report.

Culberson County: John Wolfe 1 Wilson-Briggs, 2,316 ft. from N and 1,500 ft. from E lines Sec. 1, Blk. 112, W. N. Olden Sur., Delaware sand test, location.

Ector County: Forest Dev. 1-C Edwards, SE SE SW Sec. 20, Blk. 43, Twp. 3s, T.&P. Sur., P.B. to 4,320 ft., shut in, T.D. 4,502 ft.

Loving County: Pinal Dome Oil 1 Michigan Oil fee, NW SW Sec. 15, Blk. 26-C, P.S.L. Sur., 5,300-ft. test, S.D. 5,373 ft.

Pecos County: J. D. Lancaster 2-26 University, 2,310 ft. from S and 330 ft. from E lines Sec. 26, Blk. 16, University Lands Sur., first report.

Gulf 1 Millar, Sec. 29, Blk. 11, H.&G.N. Sur., drilling below 2,167 ft.

Cremin & Boren 1 Bowen, 2,310 ft. from NW and 1,650 ft. from NE lines Sec. 60, Blk. 10, H.&G.N. Sur., 2,100-ft. test, running 8¼-in. casing to 839 ft.

A. Hargrove 1 Univ.-Continental, NE cor. Sec. 4, Blk. 7, University Sur., P.B. to 1,500 ft., T.D. 1,746 ft.

Phillips 2 Nutt, 1,980 ft. from W and S lines Sec. 17, Blk. 125, T.&St.L. Sur., 2,500-ft. test, prepare to abandon.

Redmond, Greene & Davis 1 Iowa Trust, E¼ W¼ Sec. 29, Blk. 10, H.&G.N. Sur., P.B. to 1,850 ft. to test.

Reagan County: Amerada 1-RA University, 1,980 ft. from N and 600 ft. from E lines Sec. 3, Blk. 48, University Sur., drilling below 6,166 ft.

Upton County: Plymouth Oil 2 Alford, C Sec. 50, Blk. 12, P.B. Scott Sur., drilling below 6,755 ft.

Ward County: J. E. Fitzpatrick 1 T. B. Pruitt, SW SW Sec. 23, Blk. 1, W.&N.W. Sur., still fishing, T.D. 1,510 ft.

Shell Oil 1 Sealy-Smith, 2,310 ft. from S and 330 ft. from E lines Sec. 38, Blk. A, G.M.M.B.&A. Sur., Ordovician test, drilling 2,939 ft.

Winkler County: Magnolia 20 States-Walton, NW cor. Sec. 4, Blk. 3-B, P.S.L. Sur., based Permian 7,630 ft., drilling below 7,790 ft.

Sam Weiner 2 Halley, NW NE Sec. 7, Blk. 11-B, P.S.L. Sur., T.D. 3,023 ft., prepare to complete as gas well.

Area Between Ownby and Waples-Platter Tested

In 1939 Shell 1 Waples-Platter opened the Waples-Platter pool of southeastern Yoakum County, 2½ miles northeast of the Wasson field. About a year later, April 1940, George P. Livermore completed 1 Ownby-Shell, 3 miles northeast of the 1 Waples-Platter, to open the Ownby pool. At the time of their completions, both wells were thought to be extensions of the big Wasson field. However, since that time the Waples-Platter area has been given another completion and this week the second well for the Ownby pool has been completed.

The new Ownby well, a north offset to 1 Ownby Shell, is the Sinclair Prairie 1 Granger, Section 487, Block D, Gibson Survey, which flowed 164 bbl. of oil in 24 hours on a natural gage through 1-in. tubing choke. It was bottomed at 5,355 ft. and treated with 1,500 gal. of acid before being completed.

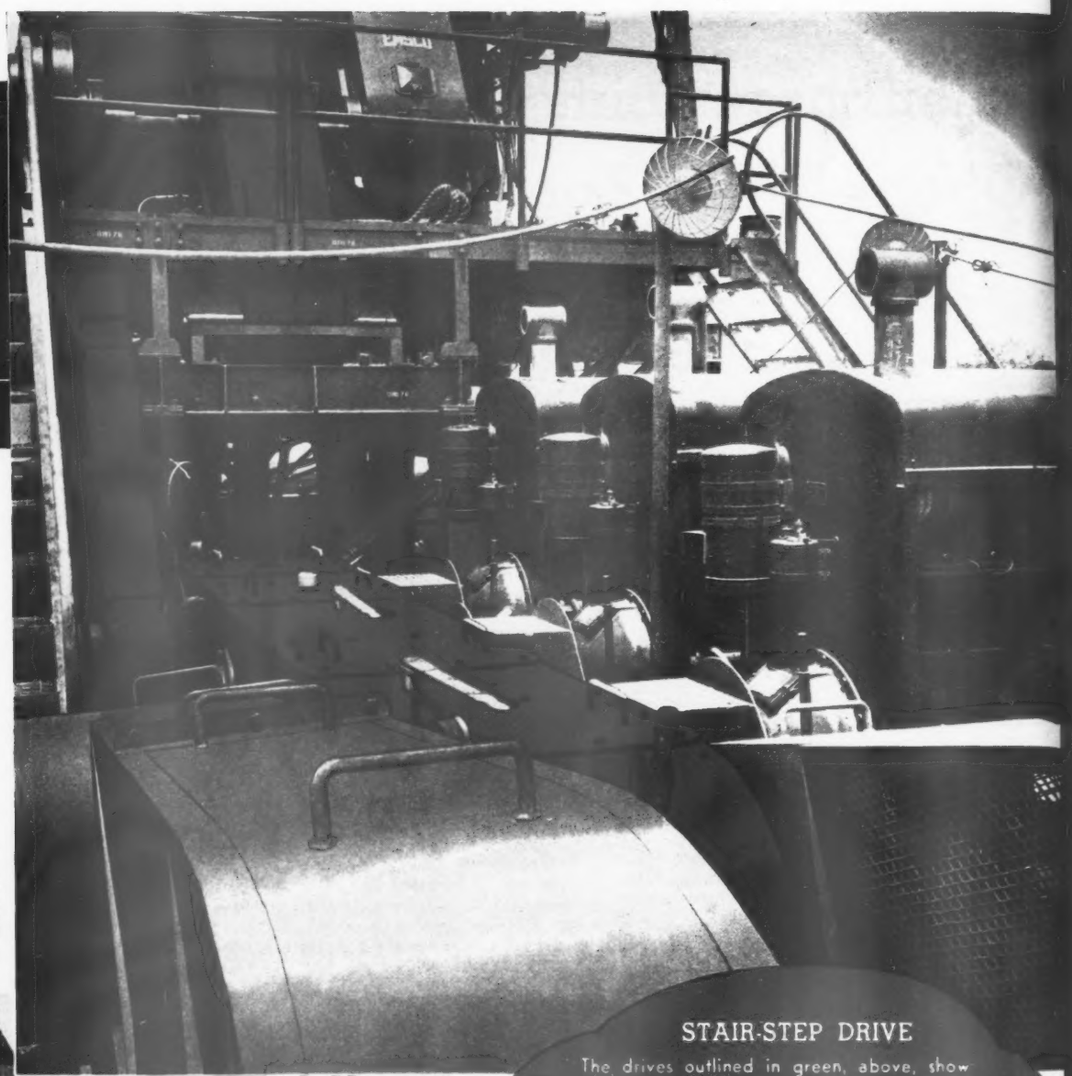
The area between the Waples-Platter and Ownby pools is now being investigated. George P. Livermore has staked 2 Ownby, 330 ft. out of the southeast corner of the lease, comprising the E½ of NE Section 502, Block D, Gibson Survey, a ⅝-mile-south outpost to the Ownby pool.

One mile west and one location north of the Ownby pool discovery, Dr. Sam Dunn has abandoned 1 R. L. Moore at 5,502 ft. in lime. The hole was not plugged. Location is 467 ft. out of the southeast corner of Section 486, Block D, Gibson Survey.

Lubbock and Lynn County Wildcats to Be Deepened

At the first of the week, Lee C. Harrison 1 Nairn

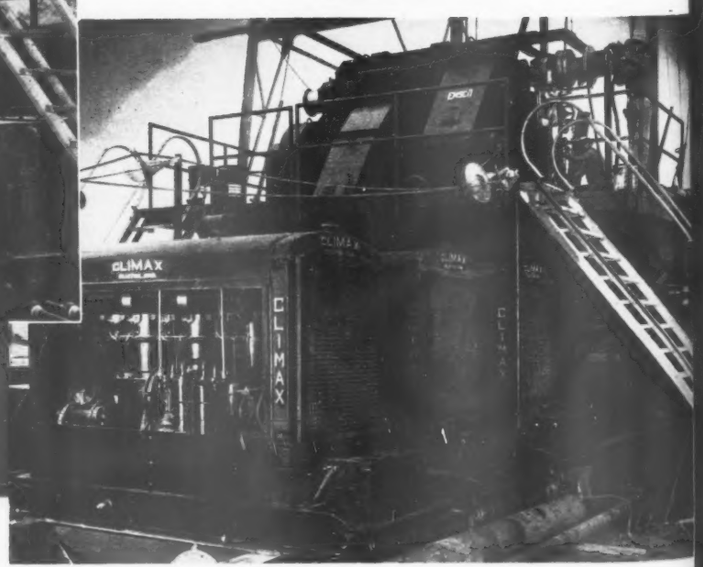
(Continued on Page 84)



Stair-step drive permits short drives, even with this high substructure. Long drives that whip and wear rapidly are eliminated from this rig.

STAIR-STEP DRIVE

The drives outlined in green, above, show how engine power is transmitted to reverse and friction clutch and drawworks by short efficient drives. Note that all heavy equipment, including engines, transmissions and pumps, are placed solidly on a ground setting with the drawworks on a high substructure.



CLIMAX ENGINES –

smooth running R-6-1—are admirable for duty in compound. These engines are especially designed for drilling service and are regularly equipped with dual magnetos, dual carburetors, triple fuel burning equipment, water-cooled exhaust manifolds and engine starting equipment.

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Record Wildcatting Results in Two More Wilcox Gassers

By GEORGE WEBER

SHREVEPORT, La., Aug. 11.—Two wildcats in the Wilcox trend in La Salle Parish last week tested gas, as the exploratory campaign continues at record rate. The new tests, as yet uncompleted, are showing gas in and above the Wilcox formation. They bring to a total of four the wildcats in the Wilcox trend which have tested gas, but which have not yet been completed.

Early in the week, Delta Drilling Co. perforated 1 Hughes, NE NE SW 22-8-1e, at 1,463-67 ft. and tested an estimated 15,000,000 cu. ft. of gas, with a slight spray of salt water. The test has since been shut in, with a rock pressure reported at 850 lb. This wildcat, on which work was recently resumed, had been shut down for several months, after topping the Wilcox at 2,017 ft. and going to 4,002 ft., total depth. It is located about 5 miles south-southwest of the South Olla gas area, and about 6 miles northwest of Nebo.

Scruggs & Todd set 5½-in. casing in 1 Pipes, NW NE 19-8n-3e, La Salle Parish, and perforated at 3,230-34 ft. testing a small amount of oil and much gas. Operators will squeeze and reperforate. The test is reported to have had shows from cuttings at 3130-70 ft. and 3,505-18 ft. The upper section indicates gas sand from 3,128-36 ft. and oil sand at 3,140-50 ft. Further tests in this wildcat will be watched with interest.

In Caldwell Parish, Big West Drilling Co. is still testing 1 A. Lowe, SE SE 36-12n-3e, which several days ago tested 15,000,000 cu. ft. of gas in the Wilcox at 2,596-2,602 ft.

Throughout the Wilcox trend, a total of 15 wildcats are drilling, testing or getting under way, and others are due to be staked shortly. One wildcat, H. L. Hunt 3 Ayers, in Madison Parish, was abandoned last week without shows.

R. H. Crowe 1 Bruce Lumber Co., in 16-21-9e, West Carroll Parish, is shut down at 6,285 ft., 325 ft. in the Smackover formation. Although the test topped the Smackover high as compared with other wildcats in the vicinity, no shows were encountered in that deep formation. Plans are believed under way to test the gas rock, which produces in the Monroe gas field to the west.

SUMMARY OF COMPLETIONS

North Louisiana

	No.	Bbl.	Footage
Oil wells: Bellevue	1	34	410
Sligo	1	70	3,151
Caddo	3	320	4,764
Olla	2	260	4,816
Nebo	1	160	4,380
Little Creek	1	166	2,743
Gas wells: Joaquin-Logansport	1	*60	5,028
Dry holes: Converse	1	.....	2,175
Wildcats	1	.....	3,584
Total	12	.....	31,051

Arkansas

	No.	Bbl.	Footage
Gas wells: McKamie	1	†400	9,381
Dry holes: Wildcats	3	.....	5,958
Total	4	.....	15,339

*Million cu. ft. gas. †Condensate.

NORTH LOUISIANA COMPLETIONS

Bellevue, Bossier Parish: Premier Inv. Co. 20-A Wyche, NW NW 14-19-11, pumped 40 bbl., 16 per cent salt water, T.D. 410 ft., 7-in. casing 327 ft., Nacatoch sand.

Sligo, Bossier Parish: Triangle Drlg. Co. 2 Murff et al, NW NE 19-17-11, pumped 70 bbl., T.D. 3,151 ft., 5½-in. casing 3,140 ft., 2,500 gal. acid, Glen Rose lime.

Caddo, Caddo Parish: F. A. Griffin 6 J. H. Herndon, SE NW 22-21-15, pumped and flowed 250 bbl., T.D. 1,595 ft., 6⅝-in. casing 1,474 ft., 4,000 gal. acid, chalk rock.

F. O. Penn 1 Thigpen, SW SW SW 31-21-15, pumped 50 bbl., T.D. 1,584 ft., 5½-in. casing 1,392 ft., 4,000 gal. acid, chalk rock.

W. E. Stewart et al 1 McAnn-West, NW SW SE 31-21-15, pumped 20 bbl., T.D. 1,585 ft., 5 7/16-in. casing 1,382 ft., 3,000 gal. acid, chalk rock.

Joaquin-Logansport, De Soto Parish: Superior Oil Corp. of Oklahoma 1 Lewis, NE NE 2-11-16, 60,000,000 cu. ft. gas, R.P. 2,410 lb., T.D. 5,028 ft., 5-in. casing 5,027 ft., perf. 4,880-90 and 4,900-50 ft., Glen Rose lime.

Olla, La Salle Parish: Arkansas Fuel Oil Co. 1 Cockerham, SE SE 23-10-2e, 120 bbl., 4 per cent salt water, 12/64-in. choke, T.P. 130 lb., C.P. 300 lb., T.D. 2,375 ft., 7-in. casing 2,375 ft., perf., Wilcox.

H. L. Hunt 31-F Goodpine, NE NW 19-10-3, 150 bbl., 3 per cent salt water, ¼-in. choke, T.P. 50 lb., C.P. 425 lb., T.D. 2,441 ft., 7-in. casing 2,417 ft., perf. 2,222-30 ft., Wilcox.

Nebo, La Salle Parish: H. L. Hunt 51-F Goodpine, SW NE 10-7-3, 160 bbl. oil, 8 bbl. salt water, 12/64-in. choke, T.P. 275 lb., C.P. 475 lb., T.D. 4,380 ft., 7-in. casing 4,083 ft., Wilcox.

Little Creek, La Salle Parish: H. L. Hunt 4 Tannehill & Gallagher, NE NE 31-9-2e, 175 bbl., 5 per cent salt water, ¼-in. choke, T.P. 150 lb., C.P. 375 lb., T.D. 2,743 ft., 7-in. casing 2,740 ft., perf. 2,400-04 ft., Wilcox.

Converse, Sabine Parish: Myers & Jenkins 1 Cassel, NE SE 25-9n-14w, T.D. 2,175 ft., dry, top chalk 1,930 ft.

Wildcat, Sabine Parish: J. H. Trotter 1 Phares, NW NW SW 4-5-12, O.W.W.O., old T.D. 4,497 ft., abandoned without deepening.

Wildcat, Madison Parish: H. L. Hunt 3 Ayers, NE SE 18-15n-10e, T.D. 3,584 ft., dry.

NORTH LOUISIANA WILDCATS

Caldwell Parish: Big West Drlg. Co. 1 A. Lowe, SE SE 36-12n-3e, testing, T.D. 4,009 ft., tested est. 15,000,000 cu. ft. gas through perf. 2,210-15 ft., Wilcox.

Catahoula Parish: O. C. Borah 1 Womack, 54-9n-5e, S.D. 2,535 ft.

Claiborne Parish: Big West Drlg. Co. 1 Alford, C W½ 11-21-4w, S.D., T.D. 6,205 ft.

Crow Drlg. Co. 1 O'Bannon, NW 30-22n-4w, coring 5,086 ft.

Hunt Oil Co. 1 Mitchiner, NE SW SW 15-23-7, drilling 645 ft.

Union Producing Co. 1 McDonald unit, SW NE SW 13-21-5w, rigging up.

De Soto Parish: J. E. Stock et al 1 Cook, NW NE 32-13-14, S.D. 2,890 ft., W.O.

Franklin Parish: Grubb & Hawkins 1 Campbell, SE NE 1-11n-7e, S.D. 2,284 ft.

S. J. Ryan 1 Womble, NW NW NW 11-12n-8e, S.D. 4,510 ft., W.O.

Grant Parish: H. L. Hunt 1-F Goodpine, NW NW 12-8-2w, drilling 3,546 ft.

E. F. Neely 1 McAdams, NE SE 19-6n-2e, drilling 3,510 ft.

La Salle Parish: Aden Oil Co. 1 Grey, NE NE 36-8-2e, drilling 2,400 ft.

Delta Drlg. Co. 1 Hughes, NE NE SW 22-8n-1e, T.D. 4,092 ft., 5½-in. casing 1,509 ft., perf. 1,463-67 ft., tested 15,000,000 cu. ft. gas, slight spray salt water, S.I., R.P. 850 lb.

Scruggs & Todd 1 Pipes, NW NE 19-8n-3e, T.D. 3,614 ft., arranging to run casing, oil and gas shows.

Natchitoches Parish: E. H. Demetrio 1 Winn, SE NW 25-10-10, rigging up.

W. A. Jacobson et al 1 Leopold Plantation, SW SE SE 33-11-9w, drilling 490 ft.

Rhodes & O'Mara 1 Prudential Life Ins Co., NE SE 36-11-10, T.D. 6,000 ft., running electrical log.

West Carroll Parish: R. H. Crowe, Tr. 1 Bruce Lumber Co., SE 16-21-9e, T.D. 6,285 ft., S.D., W.O.

New Wildcats—North Louisiana

Catahoula Parish: Roy D. Fisher 1 Bradford, SW NW frac. 29-7n-5e, location.

La Salle Parish: Placid Oil Co. 7-A Tremont, NE SE 24-9n-1e, location.

Natchitoches Parish: A. F. Carter 1 Culpepper, 36½-8n-7w, 10-in. casing 103 ft., W.O.C.

Winn Parish: H. L. Hunt 2-F Goodpine, NW SE 13-9n-3w, rigging up.

Arkansas' McKamie Field Showing East-West Trend

The McKamie field of Lafayette County was extended by the coring of saturated porous Smackover lime in Carter Oil Co.'s 1 Hanes. The mile-west outpost to production encountered the Smackover lime at 9,170 ft., and porosity at 9,231-52 ft. and 9,263-9,304 ft. The well is being tested after operators set casing and perforated.

The 1 Hanes indicates that the field may extend some distance to the west. It is running only about 33 ft. lower on the top of porous lime than the same operator's 1 Cornelius, 1 mile to the east. The north limit of the field is, on the other hand, fairly well defined by Carter 1 Cornelius unit, ½ mile north of the 1 Cornelius, which ran about 190 ft. lower, and barely missed being dry. The field shows indications of the normal east-west trend typical of Smackover lime fields.

Completion of Atlantic Refining Co. 5 Bodcaw, another north-edge test at McKamie, added to knowledge of the field last week. The test made a good gas-condensate well, although a final gage has not yet been made. It is running 11 ft. higher than the Carter 1 Cornelius unit, ½ mile west, and the edge test referred to above. This may indicate either a broadening of the field northward at that point, or a northeast trend to production.

Spacing Set on 80-Acre Pattern at Dorcheat

East of the Dorcheat field, development is about to begin in the newly opened Macedonia gas-condensate area. The Arkansas Oil and Gas Commission last week set 80-acre spacing for the field. Wells will be drilled in the center of east-west tracts comprising two governmental one-sixteenth sections, with the exception of the quarter section in which the discovery well was drilled. The 40-acre tract lying south of the 40 in whose center the McAlester Fuel Co. completed 1 Franks, will be incorporated with it, and the two 40-acre tracts to the west will be combined for the second north-south 80. The announcement of three tests to be drilled in the field followed issuing of the order, the tests to be drilled by Magnolia Petroleum Co., McAlester Fuel Co. and General Crude Oil Co. and D. R. Bullard.

ARKANSAS COMPLETIONS

Wildcat, Clark County: Coker, Christman & Grieves 1 Williams, NE NE NE 7-11-20, T.D. 1,765 ft., dry.

Wildcat, Jefferson County: Patterson & Stratton 1 Stratton, SE NW NE 35-8s-9w, T.D. 1,693 ft., dry.

McKamie, Lafayette County: Atlantic Ref. Co. 5 Bodcaw, NW 29-17-23, est. 400 bbl. condensate, 16/64-in. choke, gas-liquid ratio 11,000/1, T.D. 9,381 ft., 5½-in. casing 9,381 ft., perf. 9,272-94 ft., not final gage.

Wildcat, St. Francis County: D. T. Hargraves, Tr. 1 Peters, NE NE NE 21-4n-1w, T.D. 2,500 ft., dry.

New Wildcats—Arkansas

Clark County: Coker Oil Co. 1 McMillan & Cane, SW NE NE 34-10-19, drilling 682 ft.

Active Wildcats—Arkansas

Clark County: Coker, Grieves et al 2 Williams, NE NE 7-11s-19w, W.O.C. 605 ft.

Columbia County: L. L. Prock 1 Young, NE SE 21-15-21, drilling 3,462 ft.

Howard County: DeGrazier et al 1 Dierks Lumber Co., SW SW 7-8s-28w, S.D. 580 ft.

Lafayette County: Ohio Oil Co. 1 Garner, NW SW 13-16s-24w, drilling 3,808 ft.

Tide Water and Seaboard 1 Moore, SW SE 29-17s-24, drilling 7,280 ft.

Lee County: Stanley A. Thompson 1 Comer, NE NE NE 17-3n-2e, S.D. 2,500 ft.

Ouachita County: Theodore Davis 1 Fort Smith Timber & Land Co., NW SW 16-12-17w, S.D. 35 ft.

Prairie County: Alvin E. Stark 1 Fidelity Mutual, NE SW 16-2n-6w, S.D. 1,300 ft.

Saline County: A. W. Given 1 Williams, NE NE 18-3s-15w, set 6-in. casing 1,090 ft.

Union County: Consolidated Pet. Co.: 1 Union Saw Mill, SE NE NE 15-18s-14w, T.D. 2,257 ft., W.O. S.R.

Delta Drlg. Co. 1 Pickering, SE NW 32-18s-16w, rigging up.

AVERAGE DAILY PRODUCTION

NORTH LOUISIANA

	Aug. 9	Aug. 2
Caddo light	6,110	6,090
Caddo heavy	2,305	2,250
Cotton Valley	18,190	18,125
Cross Lake	2,800	2,750
De Soto and Red River	1,010	1,005
Haynesville	2,590	2,555
Homer	2,875	2,860
Lisbon	2,915	2,910
Nebo	2,310	2,225
Olla	13,190	12,980
Rodessa	14,575	14,475
Sligo	2,385	2,370
Sugar Creek	1,420	1,400
Urania	2,240	2,230
Zwolle	1,130	1,140
Total North Louisiana	79,315	78,555

SOUTH ARKANSAS

Atlanta	2,980	2,970
Buckner	2,220	2,240
Champagnolle	925	910
Dorcheat	1,940	1,945
El Dorado	1,535	1,520
Magnolia	20,080	20,000
Nick Springs	860	850
McKamie	3,230	3,200
Rodessa	1,400	1,360
Schuler	16,580	16,500
Smackover light	1,905	1,910
Smackover heavy	12,870	12,900
Troy	950	940
Urbana	2,410	2,385
Village	1,050	1,050
Total South Arkansas	73,580	73,300

MISSISSIPPI

Tinsley	47,245	47,215
Pickens	580	525
Total Mississippi	47,825	47,740

CALIFORNIA FIELD REPORT

Production May Be Reduced By Embargo and Tanker Loss

By L. P. STOCKMAN

LOS ANGELES, Calif., Aug. 11.—California producers were concerned last week over the probable result of present and future transfers of tankers and the Japanese embargo. The embargo, already in existence, involved about 55,000 bbl. of crude and refined oil day, and removal of four tankers from Pacific Coast trade for service to Vladivostok, Russia, was only the beginning of what was to come in loss of tankers for service on the Atlantic Coast. At least 10 of the 50 tankers now engaged in moving California petroleum products were earmarked for transfer to the East Coast, leaving California facing a loss of nearly a third of the tankers normally in use.

● SUMMARY OF COMPLETIONS ●

	No.	Bbl.	Footage
Oil wells: San Joaquin Valley	12	9,458	74,516
Coastal district	3	3,774	20,190
Los Angeles Basin	10	6,431	45,439
Gas wells: Rio Vista gas field	1	.....	4,180
Dry holes: Wildcats	3	.....	12,424
Total	29	.....	156,749

California producers figured the combination of embargo and tanker transfers even when offset by increasing domestic consumption, would mean that a reduction of at least 75,000 bbl. in the current 637,000-bbl. daily average crude oil production would be necessary. While no plans for enforcing such a reduction were announced, operators made it clear they hoped the existing Conservation Committee of California Oil Producers would be recognized as the official regulatory body for any curtailment measures.

Meantime, the search for new production continued with all operators watching closely the performance of the new Raisin City field opened by Shell Oil Co., Inc. The second completion in the field, Shell 1-19 Santa Ana & Fresno Land Co. in 19-15s-18e, last week had developed a water cut of 8 per cent, leading to the belief that it might be located very close to the edge of the structure since it was too early to expect edgewater encroachment.

The logs of the two wells finished in the Rasin City field indicate quite conclusively that the apex of the structure is located north of development work to date. Shell's next test in this field will be 28-18 Properties, Inc., in 18-15s-18e instead of 7-18 on the same property as had been expected. This new location, east of the discovery well, will be drilled because it will not necessitate immediate offset drilling as would be the case if the company moved north of the discovery well. Future development of this field will be watched with interest because of the sand problem that is present. This free running sand held up completion of the second well for several weeks and necessitated use of progressively smaller liners and liner perforations.

Paloma Unit Development Postponed Several Months

The projected unit plan of development involving the Paloma field of Kern County where the hydrocarbons are in the gas phase is still unsettled and it may be another year before actual operation gets under way. At the last minute, after practically all operators had approved the plan, Kern County Land Co. is reported to have rejected the proposal and several additional wells will have to be drilled before any further action can be taken. It is now possible, however, for Union Oil Co., Barnsdall Oil Co. and others to inaugurate a plan of their own.

The chief objection to the original plan appears to be the amount of potentially productive acreage, 5,898 acres, that was included in the proposed plan. Because of the inability to begin actual operating conditions as of July 1 as had been planned, Union Oil Co. has found it necessary to start a well on the Morgan lease in 14-32s-26e in the southeastern end of the field and Western Gulf Oil Co. is starting a new well about 1 mile east of the most easterly well in the field at present. The latter well is 12-7 Symons in 7-32s-27e and if it is completed it will automatically prove up Standard's 160-acre Symons lease in the same section.

Deep Test Started in Canal Field; Drilling Picks Up at Strand

Shell Oil Co., Inc., has started a deep test in the Canal field of Kern County in 14-30s-25e and spud has already been made. This well will be carried down to the Rio Bravo and Vedder zones of Miocene age and thus Shell and Ohio, the only operators having productive acreage at Canal, will be able to determine if the Rio Bravo and Vedder zones are productive beneath the present productive Stevens oil sand of Miocene age. It is the normal expectation that the Vedder should be found productive although this will only be determined by actual drilling.

After several months of inactivity, the Strand field of Kern County is showing a little increase in drilling. Shell Oil Co., Inc., is already down 8,717 ft. in 85-12-B Kern County Land in 12-30s-25e and Tide Water Associated Oil Co. has erected a derrick for 6-7-E Kern County Land in 7-30s-26e. Both are scheduled to be finished in the lower Stevens which was found highly productive by Tide Water Associated last year. An attempt to develop Vedder zone production in this field last year proved unsuccessful.

SAN JOAQUIN VALLEY COMPLETIONS

Belridge North, Kern County: Belridge Oil Co. 18-35 fee, 35-27n-20e, flowed 781 bbl., 32.4-gravity, 0.3 per cent cut, 16,500,000 cu. ft. gas, two 96/64-in. beans, pressures 200/300 lb., T.D. 8,278 ft., brought in with no liner in hole, pipe record consists of 5,700 ft. of 11¾-in. and 8,063 ft. of 2½-in. tubing, Temblor 5,110 ft., completed in Wagonwheel zone of Eocene age.

Coalinga Northeast, Fresno County: Pure Oil Co. 1 Coalinga, 30-19s-16e, flowed 850 bbl., 27.1-gravity, 3 per cent cut, 340,000 cu. ft. gas, 16/64-in. bean, pressures 375/1,100 lb., T.D. 8,356 ft., 100-mesh perf. 8,310-56 ft., Kreyenhagen 7,396 ft., green sand 7,657 ft., gray sand 8,112-21 ft., Gatchell zone equivalent 8,258 ft., bottomed in siltstone, recompleted in Gatchell oil zone of Eocene age, redrilled from 5,277 ft. to 8,356 ft., original depth 8,397 ft.

Standard 64-19-B fee, 19-19s-16e, flowed 2,353 bbl., 26.7-gravity, 0.1 per cent cut, 1,392,000 cu. ft. gas, 44/64-in. bean, pressures 800/2,550 lb., T.D. 8,239 ft., 60-mesh perf. 8,204-34 ft., Kreyenhagen 6,731 ft., green sand 7,804 ft., Gatchell oil sand equivalent 7,959-8,239 ft., completed in lower 30 ft. of Gatchell zone of Eocene age.

Texas 2 Grass, 30-19s-16e, flowed 880 bbl., 27.1-gravity, 0.2 per cent cut, 231,000 cu. ft. gas, 8/64-in. bean, pressures 900/1,100 lb., T.D. 8,240 ft., perf. 8,210-40 ft., Kreyenhagen 6,874 ft., green sand 8,103 ft., oil sand 8,218-40 ft., completed in lower part of Gatchell oil zone of Eocene age.

Coles Levee, Kern County: Union 74-11 Kern County Land, 11-31s-25e, flowed 765 bbl., 34.4-gravity, 1.2 per cent cut, 663,000 cu. ft. gas, 22/64-in. bean, pressures 750/1,240 lb., T.D. 9,948 ft., 120-mesh perf. 9,678-9,948 ft., N point 9,315 ft., Stevens oil sand of Miocene age 9,674-9,948 ft.

Elk Hills, Kern County: Standard 7-33-S fee, 33-30s-24e, pumped 395 bbl., 22.4-gravity, 3 per cent cut, T.D. 2,993 ft., completed in Etchegoin of Pliocene age.

Fruitvale, Kern County: Kelley, Paul V. 2 Greeley, 23-29s-27e, pumped 40 bbl., 21.0-gravity, 10 per cent cut, T.D. 3,685 ft., 250-mesh perf. 3,324-40 ft., 3,365-80 ft., 3,405-20 ft., 3,447-55 ft., 3,465-75 ft., 3,485-3,500 ft., 3,530-3,685 ft., recompleted after being cleaned out.

Greeley, Kern County: General Pet. Corp. 4 Sullivan, 12-29s-25e, flowed 1,053 bbl., 38-gravity, 1.4 per cent cut, 550,000 cu. ft. gas, 32/64-in. bean, pressures 1,000/1,100 lb., T.D. 11,490 ft., perf. 11,458-90 ft., completed in Rio Bravo zone of Eocene age 11,454-90 ft.

Superior Oil Co. 1 Vale, 1-29s-25e, flowed 460 bbl., 38.2-gravity, 0.1 per cent cut, 282,000 cu. ft. gas, 12/64-in. bean, pressures 1,180/150 lb., T.D. 11,534 ft., completed in Rio Bravo zone of Miocene age 11,503-34 ft., no liner used, 7⅝-in. casing cemented 11,502 ft., 2½-in. tubing hung 11,480 ft.

Kern River, Kern County: East Puente Oil Co. 2 fee, 20-28s-28e, pumped 20 bbl., 14.1-gravity, 25 per cent cut, T.D. 936 ft., 200-mesh perf. 730-936 ft., completed in Kern River series of Pliocene age.

General Pet. 36 Young, 14-28s-27e, pumped 140 bbl., 14.5-gravity, 35 per cent cut, T.D. 2,025 ft., perf. 1,706-1,842 ft., 1,975-2,019 ft., completed in Tegeler zone of Kern River series of Pliocene age.

National Oil Co. 27 National 20-28s-28e, pumped 15 bbl., 13.1-gravity, T.D. 925 ft., perf. 864-925 ft., completed in Kern River zone of Pliocene age.

Mount Poso, Kern County: Vedder, Dwight 5 B.N.B., 32-26-28e, pumped 400 bbl., 15.1-gravity, 20 per cent cut, T.D. 1,668 ft., 140-mesh perf. 1,635-68 ft., completed in Vedder zone of Miocene age.

Rio Vista, Solano County: Jergins Oil Co. 1 Twitchell, 8-3n-3e, flowed 15,000,000 cu. ft. gas, shut-in pressures 1,700/1,700 lb., T.D. 4,180 ft., perf. 3,975-4,180 ft., completed in gas sand of Cretaceous age.

Sharkey Landing Wildcat district, Glenn County: Holly Sugar Co. 1 fee, 32-22n-1w, abandoned as duster at 4,349 ft., no showings of oil or gas logged.

Ten Section, Kern County: Shell 3-29-A Kern County Land, 29-30s-26e, flowed 2,196 bbl., 33.7-gravity, 1.8 per cent cut, 2,211,000 cu. ft. gas, 128/64-in. bean, pressures 325/800 lb., T.D. 8,240 ft., perf. 8,039-8,231 ft., completed in Stevens zone of Miocene age 7,834-8,240 ft.

SAN JOAQUIN VALLEY OUTPOSTS

Buena Vista Hills, Kern County: Honolulu 25-P fee 10-32s-24e, T.D. 14,622 ft., P.B. 11,093 ft., drill pipe stuck, spotted oil, recovered to 12,880 ft., scraping wall, elev. 916 ft.

Canal field, Kern County: Shell 44-14-A Kern County Land, 14-30s-25e, drilling in sand 3,994 ft.

Elk Hills, Kern County: Standard 42-31-S fee, 31-30s-24e, T.D. 8,021 ft. in shale, lost drill pipe, redrilling 6,010 ft., elev. 1,122 ft.

Standard 45-19-S fee, 19-30s-24e, drilling 9,583 ft. in sand, elev. 707 ft.

Standard 76-33-S fee, 33-30s-24e, rigging up and preparing to spud.

Greeley, South, Kern County: A. N. Macrate 1 Haberfeld, 32-29s-26e, drilling 5,171 ft. in sand, elev. 338 ft.

Kettleman North Dome, Kings County: Standard 1-1-U fee, 1-23s-18e, drilling 12,835 ft. in hard gray sand, showing considerable gas, reaming hole, elev. 693 ft.

Midway-Sunset, Kern County: North Amer. Oil Consd. 1-28 W.P., 28-32s-23e, T.D. 8,212 ft. in very hard shale with streaks of tight impervious sand and siltstone, 25° dips, elev. 1,560 ft.

Mountain View, Kern County: Richfield 1 Mountain View, 16-30s-28e, location staked.

Union Avenue, Kern County: Hancock Oil Co. 1 Watts, 8-30s-28e, drilling 606 ft. in sand.

Paloma, Kern County: Union 81 Morgan, 14-32s-26e, drilling 7,894 ft. in sandy shale, elev. 306 ft.

SAN JOAQUIN VALLEY WILDCATS

Altamont district, Alameda County: Shell 1 Nissen, 7-2s-3e, drilling 642 ft. in sand, elev. 1,023 ft.

Burrell district, Fresno County: General Pet. 1 Burrell, 2-17s-18e, drilling 6,780 ft. in siltstone and gray sand, showing gas, elev. 210 ft.

Buttonwillow district, Kern County: Texas 47-15 Southern Pacific, 15-29s-24e, T.D. 12,138 ft., P.B. 4,700 ft., tested hard tight Stevens oil sand and shale, fair blow, fluid 90 per cent water and 5 per cent oil, will probably abandon, elev. 297 ft.

Superior 13 Kern County Land, 18-29s-25e, drilling and spot coring in sand and shale 12,392 ft., elev. 313 ft.

Bellevue district, Kern County: Ohio 1-G Kern County Land, 36-29s-26e, drilling 10,531 ft. in sand and shale below Stevens zone, elev. 373 ft.

Chowchilla district, Madera County: Shell 74-9 Chowchilla farms, 9-11s-14e, drilling 280 ft.

Delhi district, Yolo County: Amerada 1 Finance Construction Co., 4-6n-3e, drilling 4,682 ft. in sand and shale, elev. 8 ft.

Delano district, Kern County: Associated 46 Quinn, 8-25s-27e, drilling 1,182 ft. in sand, is joint test with Union Oil Co.

Ducor district, Tulare County: Texas 77-1 Graham & Loftus, 1-24s-26e, rigging up and preparing to spud, elev. 465 ft.

Dyer Creek district, Kern County: Shell 56-X-11, 11-26s-27e, location staked.

Helm district, Fresno County: Amerade 31-34 Clover, 34-16s-17e, rigging up and preparing to spud.

Jacalitos district, Fresno County: Wilshire-Annex Oil Co. 33-26-E, rigging up.

Lost Hills district, Kern County: Associated 46-16 fee, 16-27s-21e, drilling in sandy shale 6,591 ft., fishing drill pipe, elev. 424 ft.

Monocline Ridge district, Fresno County: Seaboard Oil Co. 2 Hagood, 6-17s-13e, drilling 3,496 ft. in Moreno shale, coring for Moreno sandstone, Eocene absent.

Panoche district, Fresno County: Richland 1 Stone-Bragg, 33-13s-12e, drilling in sand 987 ft.

Pyramid Hills district, Kings County: Pyramid Prod. Co. 2 Spreckles, 16-24s-18e, drilling in lower Temblor shale 1,870 ft., bentonite 344 ft., no showings to date, elev. 673 ft.

Raisin City district, Fresno County: Shell 7-18 Properties, Inc., 18-15s-18e, location changed to east of discovery well.

Reef Ridge, Kings County: Blair Oil Co. 1-B Ridge, 24-23e-16e, drilling in shale 391 ft., elev. 1,380 ft.

Richgrove district, Kern County: A. E. Dawson 1 Wells, 3-25s-27e, drilling 2,360 ft. in sand and shale, still above Vedder zone of Miocene age.

Rio Vista district, Solano County: Standard 1 Suisun Comm., 36-4n-2w, drilling 3,296 ft. in sand and shale, objective is Cretaceous gas zone.

Standard 1 Productive Prop., 23-3n-3e, grading location.

Standard 2 State, 30-4n-3e, drilling 3,387 ft. in sand and shale, Cretaceous gas zone object.

Superior 1 Larson, 8-3n-3e, drilling 3,631 ft. in sand objective is Cretaceous gas zone.

Superior 1 McCormack, 9-3n-3e, driving piles for derrick foundation.

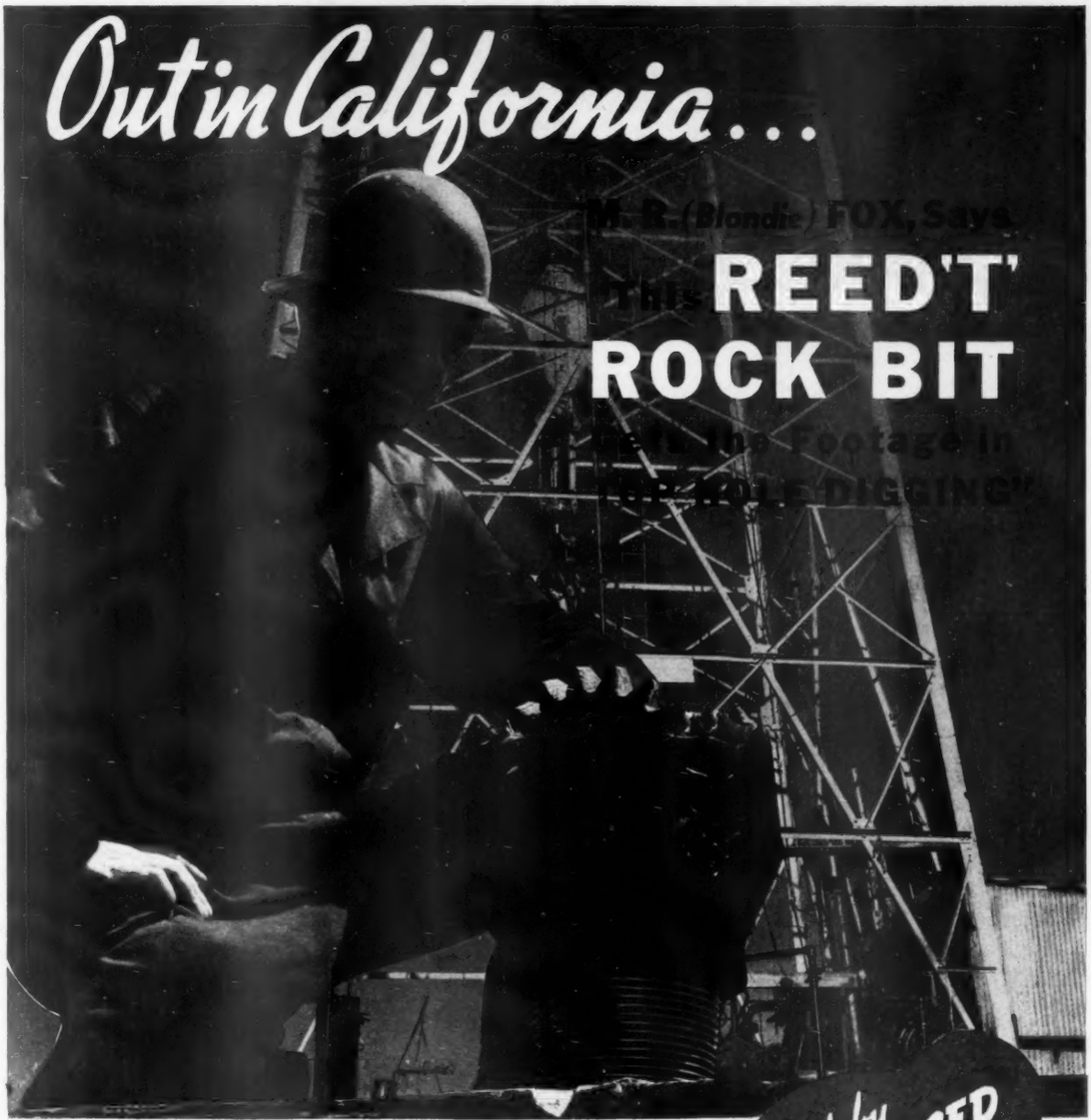
Rumsey Hills, Yolo County: Standard 1-1 Tipetts, 15-12n-3w, drilling in sand 1,943 ft., elev. 1,480 ft.

Shafter district, Kern County: Continental 2-G Kern County Land, 35-27s-24e, drilling 12,505 ft. in sand and shale, elev. 327 ft.

Los Angeles Basin Activity Drops Except at Wilmington

Drilling operations in Los Angeles Basin fields as a whole have shown a decline during the past few weeks although the Wilmington field has shown a

Out in California...



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consistent gain. Drilling reports do not yet show the increase inasmuch as many of the projected wells are still in the rig stage. There are at present 20 strings of tools in operation and 38 wells either in the rig stage or with locations staked. This indicates the probability that this field will continue to be relatively active for another several months. There are still a large number of locations in the town-lot area where Ranger zone production can be developed and there are many locations in areas where drilling operations will not be permitted. Proved limits of the Torrance field are being consistently extended and developments tend to indicate that the Ranger zone will be found productive throughout the intervening area between Torrance and Wilmington.

Drilling operations are nearing a close in the Dominguez extension and within a few weeks this area will probably be inactive. Pressures are dropping and initials of recent completions have been growing smaller and smaller. To all intents and purposes the outer limits of production have been definitely established with respect to the seventh Callender zone of Miocene age. There are at present two incompleted drilling wells in the town-lot section in the west end of the Dominguez field and both should be completed or abandoned within another 2 or 3 weeks at the most. R. E. Havenstrite is considering the advisability of drilling another well on the Larronde lease but it appears questionable whether this will be done.

In the Inglewood field, drilling operations are just about holding even although it had been expected that the rate of development in this field would have been increased before the present time. There is a tendency to restrict drilling operations to the northwest end of the structure but this practice can not be done indefinitely.

LOS ANGELES BASIN COMPLETIONS

Dominguez, Los Angeles County: R. E. Havenstrite 7 Larronde, 32-3s-13w, flowed 275 bbl., 32.5-gravity, 0.1 per cent cut, 200,000 cu. ft. gas, 18/64-in. bean, pressures 250/650 lb., T.D. 7,270 ft., perf. 7,195-7,250 ft., completed in seventh Callender zone of Miocene age.

Shell 122 Reyes, 33-3s-13w, flowed 311 bbl., 30.5-gravity, 0.8 per cent cut, 968,000 cu. ft. gas, T.D. 4,245 ft., perf. 3,855-3,984 ft., 3,994-4,036 ft., 4,046-4,137 ft., 4,200-37 ft., completed in first Callender zone of Pliocene age.

Union 16 Austin, 32-3s-13w, flowed gas lift 701 lb., 31.6-gravity, 0.2 per cent cut, 899,000 cu. ft. net formation gas, 3-in. bean, pressures 500/150 lb., T.D. 7,242 ft., perf. 7,172-7,242 ft., completed in seventh Callender zone of Miocene age.

Huntington Beach, Orange County: Signal O. & G. Co. 33-A Bolsa, 33-5s-11w, flowed 400 bbl., 28.5-gravity, 2.4 per cent cut, 250,000 cu. ft. gas, 27/64-in. bean, pressures 150/350 lb., T.D. 4,775 ft., perf. 3,720-4,650 ft., completed in Bolsa zone of Pliocene age.

Long Beach, Los Angeles County: Richfield 7 Malcom-Davis, 19-4s-12w, pumped 126 bbl., 22.9-gravity, 3.9 per cent cut, T.D. 2,515 ft., perf. 2,483-2,515 ft., completed in Alamitos zone of Pliocene age.

Shell 9 Babb-Tucker, 29-4s-12w, pumped 81 bbl., 26.2-gravity, 14.5 per cent cut, T.D. 3,515 ft., perf. 2,930-3,160 ft., 3,186-3,231 ft., 3,242-3,346 ft., 3,366-3,508 ft., completed in Alamitos zone of Pliocene age.

Seal Beach, Orange County: Continental 47 Bixby, 2-5s-12w, flowed gas lift 760 bbl., 26.5-gravity, 0.8 per cent cut, 100,000 cu. ft. net formation gas, 64/64-in. bean, T.D. 4,712 ft., perf. 4,675-4,712 ft., completed in Bixby zone of Pliocene age.

Wilmington, Los Angeles County: Long Beach Oil Dev. Co. 30-W Harbor, 10-5s-13w, flowed from Ranger zone 432 bbl., 19.3-gravity, clean, flowed from lower Terminal 295 bbl., 21.6-gravity, 8 per cent cut, Ranger zone 26/64-in. bean, pressure 90 lb., lower Terminal zone 48/64-in. bean, pressure 200 lb., T.D. 4,055 ft., perf. 2,506-2,790 ft., 3,615-3,790 ft., 3,980-4,050 ft., completed in Ranger zone and lower Terminal zone, upper Terminal zone not open to production.

Royalty Service Corp. 8 Comm., 33-4s-13w, pumped 368 bbl., 15.1-gravity, 4 per cent cut, T.D. 3,550 ft., gravel-packed perf. 2,545-2,714 ft., 2,750-2,909 ft., 2,993-3,015 ft., 3,158-3,550 ft., completed in Ranger zone.

Union Pacific R. R. 192 fee, 3-5s-13w, flowed 2,681 bbl., 27.5-gravity, 0.1 per cent cut, 162,000 cu. ft. gas, 48/64-in. bean, pressures 330/350 lb., T.D. 3,560 ft., gravel-packed perf. 2,533-2,601 ft., 2,624-51 ft., 2,691-2,763 ft., 3,024-3,150 ft., 3,190-3,246 ft., 3,263-3,313 ft., 3,332-80 ft., 3,394-3,552 ft., completed in Ranger, upper Terminal and lower Terminal zones.

LOS ANGELES BASIN OUTPOSTS OR DEEP TESTS

Dominguez, Los Angeles County: Hileford Associates 1 Developers, 29-3s-13w, drilling 3,652 ft. in sand.

Hiles-Crawford and Associates 1 Willis, 29-3s-13w tested wet 3 times at 7,253 ft., cleaned out to 7,225 ft., elev. 35 ft.

Inglewood, Los Angeles County: R. R. Bush Oil Co. 1 Merchants, 7-2s-14w, T.D. 8,872 ft. in sandy shale, checking log, elev. 190 ft.

R. R. Bush Oil Co. 1 Smith, 7-2s-14w, T.D. 8,673 ft. in sand and shale, Nodular shale 8,100 ft., elev. 185 ft.

Hogan Pet. Co. 2-A Machado, 7-2s-14w, drilling 4,394 ft. in sand and shale.

Jergins Oil Co. 2 Howard, 7-2s-14w, building rig.

Royalty Service Corp. 1 Furthman, 7-2s-14w, grading location, elev. 105 ft.

Standard 2-12 Vickers, 7-2s-14w, rig.

Standard 2-13 Vickers, 7-2s-14w, building rig.

Texas 8 Smith, 7-2s-14w, drilling 5,363 ft. in sand, elev. 242 ft.
Tide Water Associated 70 Vickers, 7-2s-14w, drilling 2,030 ft. in sand and shale, elev. 229 ft.
Traders Oil Co. 1 Bush, 8-2s-14w, graded location.
Potrero, Los Angeles County: Associated 5 Cypress, 34-2s-14w, building rig.
Rosecrans, Los Angeles County: R. S. Lytle 2 Anderson, 1-3s-14w, drilling 970 ft. in sand, elev. 233 ft.

LOS ANGELES BASIN WILDCATS

Chino district, San Bernardino County: Prado Pet. Corp. 1 Lamp, 31-2s-7w, drilling 1,571 ft. in sand, elev. 560 ft.
La Mirada district, Orange County: Texas Co. 1-A McNally, 22-3s-10w, location staked.
Manhattan Beach district, Los Angeles County: Dominguez Ext. Oil Co. 1 Sunset, 19-3s-14w, redrilled 5,926 ft., streaks of oil sand, elev. 135 ft.
Mines district, Los Angeles County: Six Companies 1 Poso Seco, 2-3s-15w, location graded, joint test by Standard, Union, Texas, Associated, Richfield and Shell which bought acreage in fee a few years ago.
Palos Verdes district, Los Angeles County: Newton Dev. Co. 1 P.V., 13-5s-15w, drilling 2,040 ft. in hard sand and shale with cable tools, fishing reamer, some basalt found.
Puente district, Orange County: Sunset Oil Co. 1 Baldwin, 11-2s-11w, drilling 1,492 ft. in sand.
Rosemede district, Los Angeles County: Rosemede Oil Co. 1 Smith, 32-1s-11w, location staked, this wildcat will be drilled 1 mi. north of eastern tip of Montebello field.
White's Point district, Los Angeles County: Surety Holding Co. 1 Sepulveda, 22-5s-14w, drilling in tar sand 135 ft., elev. 155 ft.
Whittier district, Los Angeles County: Continental Oil Co. 1 Turnbull, 13-2s-11w, drilling 2,178 ft. in sand and shale, elev. 535 ft.
Wilmington district, Los Angeles County: J. F. Wilcox 1 North, 20-4s-13w, drilling 3,396 ft. in sand and shale, elev. 46 ft.

Deep Well at Rincon Ready For Production Test

Chanslor-Canfield Midway Oil Co. has just about reached bottom in its 9-C Hobson, a deep test in the Rincon field of Ventura County, and consequently should be able to make an early production test. This well developed mechanical trouble several weeks ago and when the crews failed to effect a successful recovery the company began redrilling operations. Bottom of the hole is 9,337 ft. and the latest redrilling depth was 9,152 ft. several days ago. This well is being watched with interest because if it results in commercial production it will lead to additional drilling. It is the deepest drilled well in the Rincon field and that it has excellent production possibilities is evidenced by the fact that it flowed at frequent intervals while the crews were fishing.

The company has also started 3-C Hobson down to the 9-C zone and this well is at present rotating ahead at 7,790 ft. The Rincon field failed to prove of primary importance from a production standpoint and consequently if operators have a chance to revive production by deepening they will not lose any time in doing so. Deeper production will probably also lead to additional drilling or deepening operations on tideland leases.

Ventura Avenue Test Reaches New Record Depth

The deep drilling record for the Ventura Avenue field passed from Tide Water Associated Oil Co. to Ralph B. Lloyd this week when the latter's 8 Lloyd reached a depth of 11,100 ft. The previous deep drilling record for this field was Associated's 7 Hartman which was finished at 11,070 ft. Lloyd's deep well is in a good looking oil sand and should show substantial production when finished. Actual drilling is being done by Drilling & Exploration Co. for Lloyd's account on property that had been given up by Shell and Tide Water Associated Oil Co. following failure to develop commercial production higher up in the hole.

Ventura Avenue is the hardest field in the state to drill and it has the longest record for flush production which reflects progressively deeper drilling. Despite the depth at which production is being developed in the Ventura Avenue field no operator has yet drilled entirely through the Pliocene and it is questionable whether any one will do so in the near future as this field has an enormous thickness of Pliocene rocks.

Three Wells Are Completed in Newhall-Castaic Region

There were no changes in the status of drilling in the Newhall-Castaic region during the week except that three new wells were completed in this section of the state. St. Anthony Oil Corp. suspended drilling operations on 1 La Salle in the Newhall area in 10-3n-16w, at 4,598 ft. after drilling 1,408 ft. into the Miocene and only finding minor showings. The predominating formation in the Miocene was shale with not more than a foot or two of sand at infrequent intervals. Good gas showings were logged but no oil was noted at any time.

It may be possible that the company will go back into the hole later as it will be recalled that Western Gulf was in much the same position with 2 Lechler in the Oak Canyon field and had actually made plans to abandon work when it was decided to drill ahead a little further. This additional hole was the difference between a duster and a well that discovered a new deep producing horizon in the Oak Canyon field and likewise meant the difference between a field producing a light refinable grade of crude oil and one yielding a crude oil testing around 16°. Suspension of work by St. Anthony and abandonment of two wildcats on the Jail farm by Barnsdall Oil Co. do not change the productive possibilities of this area.

COASTAL DISTRICT COMPLETIONS

Castaic wildcat district, Los Angeles County: Barnsdall 17-1-A Jail Farm, 5-4n-16w, abandoned at 4,717 ft., 16-in. surface cemented 305 ft., first sand body 3,880 ft., second sand body 4,300 ft., formation test 4,325-4,717 ft. open 28 minutes recovered 10 stands gas-cut mud, no oil or water.
Del Valle, Los Angeles County: R. E. Havenstrite 5 Lincoln, 16-4n-17w, flowed 1,550 bbl., 34.8-gravity, 0.5 per cent cut, 400,000 cu. ft. gas, 48/64-in. bean, presure 250/350 lb., T.D. 6,112 ft., perf. 5,980-6,112 ft., completed in third Modelo zone of Miocene age.
San Miguelito, Ventura County: Continental 23 Grubb, 23-3n-24w, flow gas lift 130 bbl., 25.8-gravity, 10 per cent cut, 40,000 cu. ft. net formation gas, 48/64-in. bean, pressures 130/400 lb., T.D. 7,310 ft., perf. 6,730-7,310 ft., completed in Grubb zone of Pliocene age.
Santa Maria, Santa Barbara County: Field Gasoline Corp. 24-1 Palmer Stendel, 24-9n-33w, abandoned in volcanic ash at 3,363 ft., no oil or gas showings logged, lower portion of Sisquoc and upper portion of Monterey both productive in Santa Maria field were absent in this location.
Union 2-2 Bradley Lands, 36-10n-34w, pumped 108 bbl., 14.5-gravity, 7 per cent, T.D. 4,595 ft., 180 mesh perf. 4,475-4,575 ft., completed in Santa Maria zone.
Ventura Avenue, Ventura County: Shell 141 Taylor, 29-3n-23w, flowed 1,986 bbl., 29.8-gravity, 0.1 per cent cut, 7,593,000 cu. ft. gas, 128/64-in. bean, pressures 600/900 lb., T.D. 8,288 ft., perf. 6,797 ft., 6,957-7,077 ft., 7,119-7,601 ft., 7,642-96 ft., 7,837-7,917 ft., 7,958-8,144 ft., 8,164-8,285 ft. completed in lower zone of Pliocene age.

(Continued on Page 87)

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SOUTHWEST TEXAS

New Horizon Above Edwards Lime Opened at Washburn

By F. L. SINGLETON

CORPUS CHRISTI, Tex., Aug. 11.—Interest in the Southwest Texas district was centered on the Washburn field, La Salle County, where H. R. Cullen has opened gas-distillate production from a new horizon. The exploratory test, 3 Washburn, 3,104 ft. northwest of the discovery well, a Wilcox producer at 5,400 ft., was shut in to install heavier connection after it flowed sweet gas with a slight distillate odor. Shut-in working pressure is 4,200 lb.

This well is the deepest ever drilled in this particular area being bottomed at 11,042 ft. in the Edwards lime which was topped at 10,250 ft. Five and one-half-inch casing was cemented at 5,900 ft., and after plug was drilled tubing was swung at 5,810 ft. While little information has been released, the operator stated that he does not know from what formation the gas is coming, but does not believe it to be from the Edwards. Some geologists are of the opinion that the well is producing from the Austin chalk or Georgetown lime.

ALFRED AREA.—Additional development is expected to be started in the Alfred area, Jim Wells County, following the completion of Wilcox Oil & Gas Co. 1 Robert Adams which extended production several hundred feet west. Total depth is 5,201 ft., and on a 24-hour gas flowing from a 5/32-in. choke the well flowed 90 bbl. Production is from perforated casing opposite oil sand at 4,195-4,200 ft. Tubing pressure was 200 lb.

RIOS DISCOVERY.—Although not officially gaged, Argo Oil Corp. 1 Gonzales, the discovery well of the Rios field, Duval County, is shut in after flowing gas and an unestimated amount of amber colored distillate through a ⅞-in. choke. Shut-in tubing pressure was 2,550 lb., and casing pressure 2,925 lb. The well is located in the El Senor de la Carrera grant, 3 miles north of Santa Cruz. Production is through perforated drill stem at 6,260-90 ft.

BEEVILLE WILDCAT.—Heyser, Heard & Clardy 1 C. E. Heard, a prospective pool opener, 10 miles southeast of Beeville, Bee County, was scheduled to be tested at the close of the week. The well showed for a gasser the previous week when a drill-stem test at 4,765-71 ft. tested 450 lb. pressure in 4 minutes. Location is in the Martin Michael John Tool Survey.

COLOGNE FIELD.—A second oil producer was added to the Cologne field, Victoria County, as Houston Oil Co. 1-A J. Hornstein flowed 99 bbl. per day through ¼-in. choke. Total depth is 4,835 ft., and production is from perforated casing at 4,818 ft. In drilling this well, a second sand was opened for future development as a drill-stem test at 4,388-94 ft. recovered 3,400 ft. of pipe-line oil.

NUECES COUNTY.—Field development in the Corpus Christi area continues to be centered in Nueces County where some 37 operations are reported. The majority of this activity is located in the Agua Dulce field, with some 15 operations listed. The balance of the work is divided among the Stratton, Richard King, Minnie Bock, Clara Driscoll, Shield and South Clara Driscoll fields.

SOUTHWEST TEXAS COMPLETIONS

LOWER GULF COAST

Wildcats

Jim Wells County: Bridwell 1 A. A. Hinnant, dry, T.D. 5,603 ft.

San Patricio County: Renwar 1 Dodson, dry, T.D. 6,505 ft.

Fields

Agua Dulce, Nueces County: R. H. Hawn 1 Bush-Woffard, 90 bbl. distillate, open flow, perf. casing 6,747-52 ft., T.D. 7,070 ft.

Kilgore Developers 1 Schulze, 88 bbl., ¼-in. choke, perf. casing 6,515-24 ft., T.D. 6,539 ft.

Clara Driscoll, Nueces County: Texas Conservative 6 Hule, 72 bbl., jetting, perf. casing 5,439-45 ft., T.D. 5,462 ft.

Coleto Creek, Victoria County: Albert Plummer 5 A. Terrell, 89 bbl., ⅛-in. choke, perf. casing 4,707-11 ft., T.D. 4,734 ft.

Cologne, Victoria County: Houston Oil Co. 1-A Hornstein, 100 bbl., ¼-in. choke, perf. casing 4,818 ft., T.D. 4,835 ft.

Fagan, Refugio County: Barnsdall 9 Marberry, 149 bbl., ¼-in. choke, perf. casing 5,621-25 ft., T.D. 5,661 ft.

Seat 1 Fagan, 59 bbl., 5/64-in. choke, perf. casing 5,655-60 ft., T.D. 5,663 ft.

Simmons & Rutherford 4 Fagan, 144 bbl., ⅛-in. choke, perf. casing 5,639-49 ft., T.D. 5,655 ft.

Keeran, Victoria County: Barnsdall 12 Keeran, 131 bbl., ¼-in. choke, perf. casing 5,602-08 ft., T.D. 6,305 ft.

Luby, Nueces County: Stanolind 37 Spessard, 137 bbl., ⅛-in. choke, perf. casing 5,173-76 ft., T.D. 5,183 ft.

Richard King, Nueces County: Southern Minerals Corp. 10-A King, 84 bbl., 2/64-in. choke, perf. casing 5,358-63 ft., T.D. 5,610 ft.

Stratton, Nueces County: Bay Tex Oil 15 Union Central Life, 151 bbl., ⅛-in. choke, perf. casing 6,592-6,602 ft., T.D. 6,769 ft.

Chicago Corp. 18 Wardner, 1,485 bbl., open flow, perf. casing 6,174-6,381 ft., T.D. 6,610 ft.

Southern Minerals 22 Stratton, 89 bbl., 7/64-in. choke, perf. casing 6,412-34 ft., T.D. 6,635 ft.

S. E. W. 1 Stelzig, dry, T.D. 7,510 ft.

(Continued on Page 87)

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Gulf Coast District			
Oil wells: Agua Dulce	2	178	13,609
Stratton	3	1,725	20,014
Other fields	11	1,838	61,889
Dry holes: Fields	1	.....	7,510
Wildcats	2	.....	12,108
Total	19	.....	115,130
Laredo District			
Oil wells: Rincon	5	822	21,148
Other fields	7	575	17,974
Gas wells: Fields	1	.....	4,297
Dry holes: Fields	1	.....	8,005
Wildcats	4	.....	15,746
Total	18	.....	67,170
South Central Texas			
Dry holes: Fields	1	.....	3,001
Wildcats	1	.....	1,057
Total	2	.....	4,058

Permian Basin, Panhandle

(Continued from Page 75)

estate, Lubbock County wildcat, 3½ miles northeast of Lubbock, aroused the interest of operators when a core from 4,871-91 ft. returned 6 ft. of shaly lime with no porosity, slight gas odor and oil stain and 4 ft. of Clear Fork, lower Permian, lime with some porosity and fair saturation. Top of the pay was placed tentatively at 4,865 ft.

Plug was drilled from 7-in. casing set at 4,857 ft. and the hole deepened to 4,905 ft. Operator attempted to swab the well in and fluid showing some gas but no oil rose 2,905 ft. in the hole. The test was bailed dry and as the week closed cable-tool unit was being installed to deepen it to contract depth of 5,000 ft.

In Lynn County George P. Livermore is rigging up to deepen to a new contract depth 1 J. E. Rice, which the Uscan Drilling Co. acquired from Ross Sport and drilled to 4,890 ft., where sulfur water was encountered in the San Andreas lime. The new contract depth calls for a test of the Clear Fork, lower Permian, lime which is expected at 5,700 ft.

Location is in Section 18, Block D-11, E.L. Survey, 2 miles northeast of New Home.

NORTHERN WEST TEXAS COMPLETIONS

(24-hr. ratings based on last 3 hr. of 6-hr. gage)

Wildcats

Cochran County: Helmerich & Payne 1 Dick Slaughter 330 ft. from N and 290 ft. from W lines, Lbr. 67, Lge. 136, Armstrong C.S.L. Sur., dry at 4,895 ft.

Yoakum County: Sam Dunn 1 Moore, Sec. 486, dry at 5,502 ft.

Fields

Cedar Lake, Gaines County: Stanolind 1 Scanlan, 360 bbl., 450-gt. shot, 4,775-4,862 ft., P.B. from 4,998 ft.

Means, Andrews County: Humble 87 Means, 783 bbl., 5,000 gal. acid, 4,477-4,538 ft.

Slaughter, Cochran County: Atlantic 18 Boyd, 1,495 bbl., 2-in. casing outlet, 10,000 gal. acid, 5,014-60 ft.

George P. Livermore 6 Boyd, 1,063 bbl., 10,000 gal. acid, 5,036-64 ft.

Slaughter, Hockley County: Magnolia 6-D Mallett, 1,123 bbl., 3-in. casing outlet, 10,500 gal. acid, 4,915-5,000 ft.

Stanolind 16-A Slaughter, 1,158 bbl., 2-in. casing outlet, 8,500 gal. acid, 4,920-5,009 ft.

Stanolind 27-B Slaughter, 1,403 bbl., 2-in. casing outlet, 9,500 gal. acid, 4,930-5,004 ft.

Texas 1 Cattle Raisers, 880 bbl., 10,000 gal. acid, 4,980-5,015 ft.

Texas 70 Slaughter, 1,049 bbl., 10,000 gal. acid, 4,925-75 ft.

Texas 23 Slaughter, 1,074 bbl., 10,000 gal. acid, 4,955-5,005 ft.

Western States 11 Frazier, 1,877 bbl., 11,000 gal. acid, 4,930-5,000 ft.

Western States 5-B Mallett Lands, 1,300 bbl., 9,000 gal. acid, 4,975-5,035 ft.

Wasson, Yoakum County: Drilling & Exploration 1-A Roberts, 248 bbl., 6/16-in. choke, 11,000 gal. acid, 4,920-5,200 ft.

Mabee Oil & Gas 3 Kiel, 101 bbl., ⅜-in. choke, 10,000 gal. acid, 5,100-5,285 ft.

Sinclair Prairie 6 Willard, 1,348 bbl., 1-in. choke, 6,500 gal. acid, 5,120-5,285 ft.

Sinclair Prairie 8 Willard, 953 bbl., 6,500 gal. acid, 5,000-30 ft.

NORTHERN WEST TEXAS ACTIVE WILDCATS

Andrews County: Mascho Oil 1 Texas-University, Sec. 11, Blk. 13, University Sur., drilling below 4,890 ft.

Mascho Oil 1 Fisher, NE NE SE Sec. 16, Blk. 36-A, P.S.L. Sur., prepare to acidize, T.D. 4,602 ft., recemented back to 4,590 ft.

Borden County: Coffield & Guthrie 1 Conrad, SE NW Sec. 79, Blk. 20, Lavaca Navigation Co. Sur., T.D. 3,305 ft., prepare to set 7-in. casing.

O'Neal Drilling Co. 1 Wright, NE cor. Lbr. 12, Lge. 60, Martin C.S.L. Sur., 3 mi. N of Dean area, swabbed 60 bbl. fluid in 8 hr., 20 per cent basic sediment and sulfur water, perf. casing 4,835-80 ft., 5,000 gal. acid, shut in.

Dawson County: Stanolind 2 Scanlan, 660 ft., from S and E lines Sec. 87, Blk. M, E.L. Sur., first report.

Gaines County: Amon G. Carter 4-D Wasson, NW SE Sec. 50, Blk. AX, P.S.L. Sur., set 5½-in. casing at 10,615 ft., T.D. 11,108 ft., tight well, no report.

Garza County: Ed McAdams 1 K. Stoker, 1,320 ft. from S and E lines NE¼ Sec. 942, Blk. 97, H.&T.C. Sur., 3,500-ft. test, fishing tools 2,528 ft.

Lubbock County: L. C. Harrison 1 Nairn, Sec. 25, Blk. A, John H. Gibson Sur., 7-in. at 4,857 ft., T.D. 4,891 ft.

Lynn County: Uscan Drilling Co. (formerly Ross Sport) 1 J. E. Rice, 660 ft. from N and W lines Sec. 18, Blk. 11, E.L. Sur., fishing 4,891 ft.

Mitchell County: G. R. Anderson 1 Simpson, 2,310 ft. from S and 330 ft. from E lines Sec. 65, Blk. 97, H.&T.C. Sur., drilling 985 ft.

Humble 1 Ellwood, 1,980 ft. out of E cor. Sec. 49, Blk. 16, S.P. Sur., 8,500-ft. test, M.I.M.

TEXAS PANHANDLE

AMARILLO, Tex., Aug. 11.—The Panhandle fields again climbed in new locations the past week with a total of 36 new sites announced. All of the producing counties in the district were represented by the starts. There were 13 new oil wells and 1 gas well completed during the week for an aggregate new daily oil potential of 2,662 bbl.

TEXAS PANHANDLE COMPLETIONS

(24-hr. pumping gages)

Carson County

Cities Service Oil 41-A Burnett, 35,500,000 cu. ft. gas, 2,140-2,320 ft.

Gray County

B. Baldridge 3 Davidson, 113 bbl., natural, 3,009-3,110 ft.

Danciger Oil & Refg. 21 Powell-Beck, 649 bbl., 2,797-2,897 ft.

King Oil 11 Archer, 260 bbl., 160-qt. shot, 3,165-3,226 ft.

Magnolia 12 Barrett, 105 bbl., 300-qt. shot, 3,225-95 ft.

S. & M. Oil 12 Worley, 42 bbl., 790-qt. shot, 3,166-3,268 ft.

Hutchinson County

Huber Corp. 1 Harrison, 100 bbl., 3,000 gal. acid, 3,225-57 ft.

Phillips 66 Cockrell, 226 bbl., 400-qt. shot, 2,804-2,935 ft.

Phillips 79 Cockrell, 302 bbl., 300-qt. shot, 2,935-3,015 ft., plugged back from 3,050 ft.

Phillips 34 Perkins, 54 bbl., 300-qt. shot, 2,895-2,970 ft.

Shell 25 Harvey, 282 bbl., 155-qt. shot, 3,022-83 ft.

Stanolind 27 Watkins A, 197 bbl., 720-qt. shot, 2,900-3,001 ft.

Texas 11 Moore, 66 bbl., 190-qt. shot, 3,096-3,160 ft.

Wheeler County

H. L. Guild 1 Mitchell, 150 bbl., natural, 1,990-96 ft.

SOUTHEAST NEW MEXICO COMPLETIONS

Wildcats

Chaves County: Montgomery 1 Purcell, SW NW 13-11s-26e, dry at 2,202 ft.

Eddy County: Sanders Bros. 1 Dee Temple, SW SW 27-19s-31e, dry at 2,590 ft.

Lea County: Ideal Drlg. 1 Cunningham, SW SW 22-19s-35e, location abandoned.

Fields

Cooper, Lea County: Skelly 1 Cooper, NE SW 12-24s-36e, 205 bbl., T.D. 3,607 ft.

Maljamar, Lea County: Rutledge 1-B Mitchell, SE SE 17-17s-32e, 50 bbl., T.D. 4,136 ft.

Love 1-B Pearsall, NW NW 4-18s-32e, 225 bbl. in 17 hr., T.D. 3,710 ft.

North Penrose, Lea County: Parker Drlg. 2-C Humble, NW SW 2-22s-37e, dry at 3,773 ft.

Vacuum, Lea County: Phillips 44 Santa Fe, SE NE 34-17s-35e, 15 bbl. in 9 hr., T.D. 4,578 ft.

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MICHIGAN OPERATIONS

Pay Area at Reed City Is Doubled by Extensions

By OTTO C. PRESSPRICH

SAGINAW, Mich., Aug. 11.—Despite the state's first major strike of oil field and refinery workers affecting Pure Oil Co. during the first week of August, there was no appreciable letdown in drilling completions last week, a week noteworthy for a completion that virtually doubled the proven area of Michigan's booming new Reed City oil field.

Gordon Oil Co. was completing G-1 State in Section 29 of Lincoln Township, Osceola County, and reported the well flowed 130 bbl. the first hour from a depth of 3,529 ft. Offset to Weber Oil Co. 1 Clark gusher, it extends the field to the east. It is the eleventh consecutive successful completion in the field which begins about 3 miles northwest of Reed City.

Meanwhile, Gulf Refining Co. 2 Wilson, in Section 30, was about to be drilled in as the west offset to the Clark. Pure Oil Co., with nine tests drilling in the field, had two near completion stage when its field workers struck.

The week also brought another boost to the North Adams field in Arenac County when the Don Rayburn 2 Kerr in Section 22 was completed for initial production estimated at 2,160 bbl. a day natural. Farthest north producer in the field to date, it offsets a dry hole to the northwest in Section 15. The Rayburn-Basin 1 Mutch wildcat in Deep River Township, Section 17, showed a big head of gas around 1,400 ft. in the Berea, and Rayburn announced plans to retest in Monroe formation around 4,300 ft. in the 1 Fox, Section 21, on which drilling was halted after reaching a depth of about 4,560 ft.

While Sun Oil Co. completed A-6 State in Section 36 of Winterfield Township, Clare County, for natural production of 20 bbl. an hour initially, field prospects were hit by another dry Dundee test, the Sun 5 Thayer in Section 29. On the face of that showing locations for 1 Hamer, in that section, was abandoned.

Half-mile easterly extension of the Monitor field in Bay County resulted from Freeman Oil Co. completion of 1 Rae, Section 12, which was pumping about 20 bbl. a day. Drilling continued on the state's deepest test, Gulf Refining Co. 1 Bateson, down below 4,800 ft. as the week ended and believed within a few hundred fet of the St. Peter sand objective. Officials reported no change in the situation and said no decision has been reached as to procedure in event the objective formation is nonproductive.

Three of the six tests completed as dry holes during the week which resulted in a total of 16 completions in the state, were in Allegan County. The others were in Barry, Clare and Osceola—the Osceola failure being a Hersey Township wildcat test.

Drilling permits issued during the week by the state Conservation Department totaled 11, bringing the number for the year to 505. Two of the three permits for Osceola County are for wildcat tests in Sylvan Township. Three others are for Clare County, one each for Arenac, Cass, Antrim, Allegan and Van Buren counties.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells:			
Allegan County	1	20	1,348
Arenac County	1	2,160	2,863
Bay County	1	20	2,912
Cass County	1	30	646
Clare County	1	480	3,766
Ottawa County	1	35	1,889
Osceola County	1	3,100	3,529
Van Buren County	1	32	1,296
Gas wells:			
Isabella County	1	*0.4	1,340
Mason County	1	*0.135	3,303
Dry holes:			
Allegan County	3	.....	4,488
Barry County	1	.....	2,300
Clare County	1	.....	3,810
Osceola County	1	.....	3,950
Total	16	.....	37,510

*Million cu. ft.

MICHIGAN COMPLETIONS

Allegan County

Dorr Township: Freeman W. Haskins, Tr., 1 Weidenfeller, SW SE NW 29-4n-12w, dry, T.D. 1,643 ft. in Traverse limestone.

Lee Township: Sprenger Bros. 1 Warning et al, SW SW SW 8-1n-15w, dry, T.D. 1,204 ft. in Traverse limestone.

Overisel Township: W. L. McClanahan 1 Van Rhee, NW NE SE 3-4n-14w, wildcat, dry, T.D. 1,601 ft. in Traverse limestone.

Trowbridge Township: J. W. McIntosh 1 Darby, NW SW NW 20-1n-13w, acid, pumping 30 bbl., T.D. 1,348 ft. in Traverse limestone.

Arenac County

Adams Township: Don Rayburn and Ervin Major 2 Kerr, NW NE NE 29-19n-3e, 2,160 bbl., natural, T.D. 2,863 ft. in Monroe.

Barry County

Barry Township: Wolverine Natural Gas Corp. 1 Dickerson, NE NE NE 4-1n-9w, wildcat, dry, T.D. 1,885 ft., plugged back from 2,300 ft.

Bay County

Monitor Township: Freeman Oil Co. 1 Rae, SW SW NE 12-14n-4e, pumping 20 bbl., acid, T.D. 2,912 ft. in Monroe.

Cass County

Ontwa Township: Horace T. Barnaby, Tr., 1 Roberts, SW SW SE 23-8s-15w, wildcat, pumping 30 bbl. and water, acid, T.D. 646 ft. in Traverse limestone.

Clare County

Winterfield Township: Sun Oil Co. A-6 State-Winterfield, C N½ SE SW 36-20n-6w, est. 480 bbl. natural, T.D. 3,766 ft. in Dundee.

Sun Oil Co. 5 Thayer, C W SW SW Sec. 29, dry, T.D. 3,810 ft. in Monroe.

Sun Oil Co. 1 Hamer, C W SW SW Sec. 29, location abandoned.

Isabella County

Broomfield Township: Fletcher & Leman 1 Leach-Sander Comm., C NE 25-14n-6w, 400,000 cu. ft. natural gas, T.D. 1,337 ft. in Marshall, plugged back from 1,340 ft.

Mason County

Logan Township: Merrill & Dean 1 Young, SE NW SW 9-17n-15w, wildcat, show of oil, completed as gas well, 135,000 cu. ft., T.D. 3,303 ft. in Sylvania.

Osceola County

Hersey Township: C. L. Maguire, Inc., 1 State-Watson, C E½ SE NW 1-17n-9w, dry, T.D. 3,950 ft.

Lincoln Township: Gordon Oil Co. G-1 State, C S½ NE NE 29-18n-10w, 130 bbl. first hour, T.D. 3,529 ft.

Ottawa County

Tallmadge Township: Mesel & Spielberg 1 Cross, SE SW NW 14-7n-13w, pumping 35 bbl. and water, acid, T.D. 1,889 ft. in Traverse lime.

Bloomingdale Township: N. R. Dodd 1 Bell, SW SE NW 1-1s-14w, pumping 32 bbl. and water, natural, T.D. 1,296 ft. in Traverse limestone.

Roscommon County Tract Brings High Price at Sale

J. V. Wicklund, Detroit independent, paid $30,100 for the oil rights on a 40-acre tract in Roscommon County as the feature of a 2-day auction at Lansing of leases on state-owned lands. The bid was the second highest ever received. A few years ago $48,000 was paid for a 40-acre tract in Buckeye-Gladwin.

The land is adjacent to the Eugene Hilliard wildcat gusher discovery of several weeks ago in Roscommon County. State officials said the sale, in which oil and gas rights on 39,000 acres of state land, were sold, was financially the most satisfactory ever conducted. The Conservation Commission will meet August 19 to approve bids.

Oklahoma City Lease Sale Is Announced

Purchase of the Westgate Oil Co.'s interest in the prolific Carey lease in the Oklahoma City field, by the Natural Gas Development Corp. (Delaware) was announced by Conrad C. Mount, attorney for the interests.

Consideration was not announced but was understood to have been a large cash payment, plus notes extending over a period of years. On a previous deal, it was reported the Westgate interest was valued at around $500,000. The deal is effective as of July 1.

The Natural Gas held a 12 per cent interest in the properties, while Westgate held a 34 per cent interest; remainder was owned by several trusts headed by W. E. Brown of Tulsa.

Several weeks ago it was reported the Westgate was to sell its interest to the Phillips Petroleum Co. and contracts were drawn, but the Natural Gas exercised a purchase contract.

Mr. Mount said there would be no change in personnel and operation of the lease would continue as at present. There are 13 Wilcox sand producers on the tract, yielding in excess of 90,000 bbl. of oil per month.

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FORMATION AND CASING TESTING — JOHNSTON

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Southwest Texas Fields

(Continued from Page 84)

Tom O'Connor, Refugio County: Quintana 47 Heard, 704 bbl., ¼-in. choke, perf. casing 5,798-5,811 ft., T.D. 5,925 ft.

East Premont, Jim Wells County: Magnolia 17 Seeligson, 169 bbl., 5/32-in., perf. casing 5,555-57 ft., T.D. 6,856 ft.

SOUTHWEST TEXAS DRILLING REPORT

Brooks County: Sun 1 J. D. Cage, Sur. 141, T.D. 6,135 ft., D.S. stuck.

Bee County: Hewitt & Dougherty 1 George Ray, J. Poitevent Sur., 3 mi. E of Beeville, coring shale 3,826 ft.

Hidalgo County: W. R. Davis 1 Dowley, 2 mi. S of San Juan, drilling shale 6,528 ft.

W. R. Davis 1 Arizona-Texas Citrus Co., McAllen area, T.D. 8,514 ft., 7-in. 7,934 ft., perf. casing, tested salt water, retesting.

Lee County: John F. Camp 1 R. C. Hardin, 1½ mi. NW of Smith Springs, Albert Nantz Sur., drilling shale 1,960 ft.

Live Oak County: Rantex 1 Hinnant, Edward Quinn Sur., 3 mi. W of Lagarto, drilling shale 4,210 ft.

Maverick County: Wellington 2 Indio Cattle Co., top Austin chalk 3,220 ft., drilling Austin chalk 3,477 ft.

Milam County: Hamman Oil & Refining Co. 1 Powers, B. F. Brewster Sur., drilling shale 2,387 ft.

Skidmore & Disbro 1 Graham, Charles Conea Sur., drilling chalk 1,320 ft.

Starr County: Lewis Production Co. 1 Osborn, Los Retachez grant, drilling shale 1,054 ft.

Webb County: D. J. Moss 1 Gilbert, Ernest C. Gasser Sur., drilling shale 945 ft.

Willacy County: Clark & Cowden 1 Yturria Cattle Co., San Juan de Carrecitas grant, drilling shale and lime 6,915 ft.

Zavala County: Humble 1 Rosa Wolf, 7½ mi. N of Crystal City, Pedro Jose de Aguirre grant, coring shale and lime 5,194 ft.

LAREDO DISTRICT

Wildcats

Duval County: Henderson Coquat 1 Southern Life Insurance Co., dry, T.D. 5,058 ft.

Live Oak County: Rotary Drilling Corp. 1 Suggs, dry, T.D. 4,562 ft.

Starr County: Sun 2 Hall, dry, T.D. 4,742 ft.

Webb County: W. C. McBride 1 E. W. Doble, dry, T.D. 1,384 ft.

Fields

Casa Blanca, Duval County: Adelon 8-C Martin, 23 bbl., pumping, sand 1,128-46 ft.

Colorado, Jim Hogg County: Humble 24-B King, 167 bbl., ⅞-in. choke, sand 3,026-41 ft.

Government Wells, Duval County: Magnolia 16 Hahl-Southerland, 56 bbl., pumping, sand 2,295-94 ft.

Labbe, Duval County: W. C. Butler 2 Labbe, 168 bbl., gas lift, perf. casing 2,862-65 ft., T.D. 2,974 ft.

Lundell, Duval County: Government Wells 53 Lundell, 37 bbl., ¼-in. choke, sand 1,558-68 ft.

Oakville, Live Oak County: Simmons 2-C Reagan, 40 bbl., ¼-in. choke, perf. casing 2,743-48 ft., T.D. 2,751 ft.

Henderson Coquat 1 Reagan, dry, T.D. 8,005 ft.

Rincon, Starr County: Continental 50-A Slick, gas well, perf. casing 3,608-24 ft., T.D. 4,297 ft.

Continental 59-A Slick, 202 bbl., ⅞-in. choke, perf. casing 3,770-86 ft., T.D. 4,250 ft.

Continental 71-B Slick, 48 bbl., 12 hr., ⅞-in. choke, perf. casing 3,768-86 ft., T.D. 4,450 ft.

Continental 93-B Slick, 122 bbl., 12 hr., ⅞-in. choke, perf. casing 4,022-28 ft., T.D. 4,200 ft.

Continental 94-B Slick, 237 bbl., ⅞-in. choke, perf. casing 4,054-60 ft., T.D. 4,138 ft.

Continental 3-E Slick, 213 bbl., ⅞-in. choke, perf. casing 4,040-53 ft., T.D. 4,110 ft.

Sam Fordyce, Starr County: Phillips 5 Saenz, 84 bbl., 5/32-in. choke, perf. casing 4,148-50 ft., T.D. 4,200 ft.

SOUTH CENTRAL TEXAS

Wildcats

Wilson County: C. G. Newton 1 Hierholzer, dry, T.D. 1,057 ft.

Fields

Tennev Creek, Caldwell County: J. P. Griffith 1 Northcut, dry, T.D. 3,001 ft.

California Fields

(Continued from Page 83)

COASTAL DISTRICT WILDCATS

Aliso Canyon district, Los Angeles County: Associated 1 Mission, 26-3n-16w, drilling 1,032 ft. in sand, elev. 2,710 ft.

Castaic district, Los Angeles County: Texas 1 Newhall Land & Farming, 11-4s-17w, location staked.

Cat Canyon district, Santa Barbara County: A. E. Bell 1 Gilmore, 23-9n-33w, drilling in sand 782 ft.

Elwood district, Santa Barbara County: Barnsdall-Richfield 88-12 State, Tideland, drilling 3,111 ft. in sand and shale, elev. 21 ft.

Loma Grande district, Monterey County: Loma Grande Oil Co. 1 Corey, 23-24s-10e, T.D. 3,790 ft. in shale, fishing drill pipe, elev. 1,500 ft.

Los Flores district, Santa Barbara County: Standard 2 Los Flores, 27-9n-33w, drilling 6,425 ft. in oil sand and shale, shows considerable gas, preparing to run casing, elev. 1,084 ft.

Newhall district, Los Angeles County: Aztec Oil Co. 1 Sanborn, 6-3n-16w, T.D. 4,300 ft. in Miocene sandy shale, to move in heavier equipment, elev. 1,516 ft.

Kenneth Oil Prod. Co. 1 Shepherd, 34-4n-15w, drilling 2,020 ft. in sand, elev. 2,000 ft.

St. Anthony Oil Co. 1 La Salle, 10-3n-16w, drilling 4,798 ft. in very hard brown shale, elev. 1,480 ft.

Tunnel Oil Co. 1 Needham, 13-3n-16w, drilling 682 ft. in hard conglomerate, expect production around 1,550 ft., elev. 1,681 ft.

Rincon, Ventura County: C.C.M.O. Co. 9-C Hobson, 17-3n-24w, T.D. 9,338 ft. in sandy shale, redrilling 9,192 ft., lower part of first hole lost account of mechanical trouble, elev. 49 ft.

San Martinez district, Los Angeles County: Bankline Oil Co. 1 Videgain, 17-4n-17w, drilling 2,994 ft. in sand and shale, elev. 1,750 ft.

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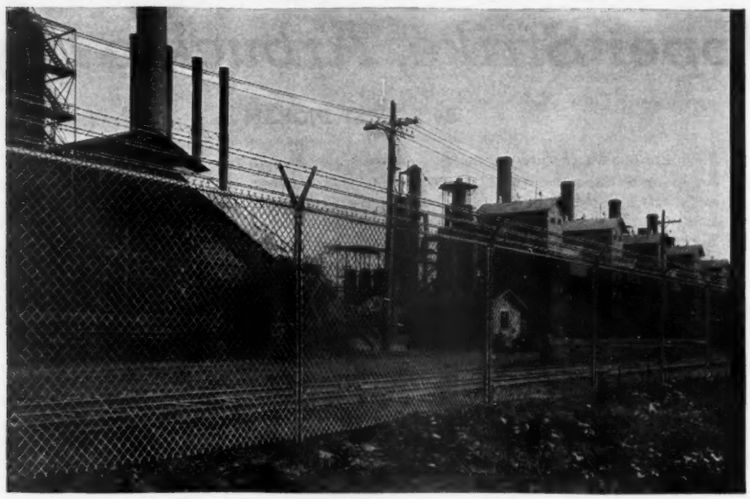

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Kearny County Well Testing Upper Strike, Arbuckle Dry

By ROBERT INGRAM

FAR western Kansas was assured a major development last week as Stanolind Oil & Gas Co. made a second test of the stray sand in the Cherokee series (Pennsylvanian) at 1 Patterson, SE SE 23-22-38w, in Kearny County. After the first test some weeks ago in which oil rose 1,800 ft. in the hole, 7-in. casing was set at 4,806 ft. to shut off the oil sand and the hole was deepened to test lower formations. It was drilled through the Arbuckle, topped at 5,655 ft., to a total depth of 5,690 ft. No shows were reported, and the well was plugged back to 4,780 ft.

Casing was perforated from 4,740-82½ ft. where the previous show was found, and the hole filled 3,050 ft. with 34-gravity oil. On a 3-hour swabbing test, the well made 21 bbl. the first hour, 23 bbl. the second hour and 20 bbl. the third hour through 2½-in. tubing 1,500 ft. off bottom. Bottom-hole pressure at 4,740 ft. was 1,148 lb.

Wichita oil men described the strike as the most significant in the past 5 or 6 years and Theo A. Morgan, state conservation director, said, "It's the biggest thing we've had in Kansas in a long time."

Significance of the strike lay not only in the location of the well—only 30 miles from the Colorado State line and well out of the Barton arch play of Central Kansas—but also in the fact that production was coming from a Pennsylvanian sand which is unusual for the state. The well was located on what is known as the Dodge City basin, probably a part of the vast Anadarko basin of West Central Oklahoma, and in an area about which very little subsurface information is available. Whether development would extend west toward eastern Colorado, or east toward present Kansas production, was still a question at week's end.

Pool Openers Are Gaged in Russell and Rooks Counties

Kansas drilling operations continued strong last week after a slight lull the previous week in new locations, and wildcatting was up in all areas, particularly in a new area in the northeastern part of the state where the McLouth pool has been growing fast in recent weeks in both oil and gas production. Five new wildcats were started in Leavenworth and Jefferson counties in the McLouth area following the successful completion of a 1¼-mile north extension to the pool proper the previous week (see The Oil and Gas Journal, August 7, 1941). The new wildcats are listed below in the drilling report.

New locations were also staked in Norton County by Cities Service Oil Co. on what appeared to be a likely trend north from the Ray pool in Phillips County, and in Pawnee County near the Pawnee Rock pool, a 1940 discovery which has grown fast in recent months and last week was spreading out toward Barton County.

Cities Service also opened the Erway pool in Rooks County, SE SE SE 2-10-16w, 4 miles south of the Laton pool, and two pools were given official potentials in Russell County (see wildcat completions below).

SUMMARY OF COMPLETIONS

Kansas

	No.	Bbl.	Footage
Oil wells: Fields	3	8,295	11,407
El Dorado	2	63	3,960
Cunningham	3	6,062	11,524
Hall-Gurney	3	4,152	8,727
Other pools	29	25,684	92,747
Wildcats	3	1,320	10,072
Gas wells: Fields	1	*2.740	1,447
Dry holes: Fields	8	.....	27,213
Wildcats	7	.....	19,760
Total	59	.....	186,857

Nebraska

	No.	Bbl.	Footage
Oil wells: Falls City	3	1,585	6,928
Schubert	1	137	2,671
Total	4	.....	9,599

*Million cu. ft.

KANSAS COMPLETIONS

Wildcats

Cities Service 1 Erway ..... SE SE SE 2-10-16w Swabbed 58 bbl., 37 gravity, Kansas City lime, 4-in. 3,205 ft., perf. 3,136-47 ft., 3,109-12 ft., 3,156-59 ft. and 3,069-80 ft., Arbuckle 3,485 ft., T.D. 3,495 ft., *opens Erway pool,* Rooks County.

Central 1 Steinle ..... N½ NW NE 29-15-12w Potential 1,099 bbl., Arbuckle 3,318-20 ft., 5-in. 3,319 ft., T.D. 3,320 ft., *pool opener,* Russell County.

Central 1 Gustason ..... SE NW 14-15-12w Potential 163 bbl., pumped 54 bbl. in 8 hr., 39 gravity, Arbuckle 3,244-46 ft., 5-in. 3,245 ft., T.D. 3,257 ft., *pool opener,* Russell County.

Clyde Barker 1 Hannebohm ..... NE SW SE 15-24-4e Dry, T.D. 80 ft., Butler County.

Branine & Holl 1 Rexroot ..... E½ NE SE 22-17-13w Dry, T.D. 3,500 ft., Arbuckle 3,450-3,500 ft., water. Barton County.

Adair & Morton 1 Piper ..... NE NW NE 36-29-4e Dry, T.D. 2,870 ft., Mississippian lime 2,850 ft., Butler County.

Rusco 1 Phillips ..... SE NE NE 6-14-13w Dry, T.D. 3,334 ft., Arbuckle 3,325 ft., some show oil, Russell County.

Elbar 1 Curtis ..... NE NE NE 18-25-13w Dry, T.D. 4,325 ft., Arbuckle 4,290 ft., Stafford County.

McKnab 1 Mattke ..... N½ NW NW 17-12-22w Dry, T.D. 4,150 ft., Simpson 4,095 ft., Arbuckle 4,119 ft., Trego County.

E. V. Jackson 1 Fevurly ..... SW SE 1-9-20e Dry, T.D. 1,501 ft., Mississippian lime 1,370 ft., Leavenworth County.

Fields

Ainsworth, Barton County: Stanolind 2 Morrison-B, E½ E½ NW 26-16-13w, dry, T.D. 3,434 ft.

Augusta, Butler County: Cities Service 33 Varner, NE NW NE 17-28-4e, 38 bbl., Kansas City lime 1,998-2,013 ft., T.D. 2,013 ft.

Bitikofer, McPherson County: Winkler-Koch 1 J. J. Voth, E½ NE NE 1-20-1w, dry, T.D. 2,968 ft.

Breford, Ellsworth County: Champlin 1-B Burmeister, NW SE SE 13-17-10w, 108 bbl., Arbuckle, T.D. 3,333 ft.

Burnett, Ellis County: Shell 2 Deans, SW NE NE 14-11-18w, swabbed 66 bbl., Arbuckle, T.D. 3,375 ft.
Dickey 5 Mollman, W½ NE NE 18-11-17w, 3,000 bbl., Arbuckle, acid, T.D. 3,361 ft.

Cairo, Pratt County: Bay 1 Beck, SE SE SE 12-28-12w, dry, T.D. 4,330½ ft.

Chase, Rice County: Bay 3 Grizzell, S½ SE NW 8-19-9w, 3,000 bbl., Arbuckle, T.D. 3,260 ft.
Derby 2 Link, N½ NW SE 19-19-9w, swabbed 35 bbl., Arbuckle, T.D. 3,277 ft.

Cunningham, Pratt County: Drillers Gas 1-B Gerber, S½ SE NE 35-27-11w, 3,000 bbl., Kansas City lime, acid, T.D. 3,750 ft.
Beardmore 4 Kemp, N½ 12-28-11w, 3,000 bbl., Viola acid, T.D. 4,267 ft.
Skelly 6 Moore, W½ SW SW 25-27-11w, Lansing, acid, T.D. 3,507 ft.

El Dorado, Butler County: Cities Service 200 Wilson, SW SE NW 8-25-5e, 38 bbl., Kansas City lime, pay 1,980 ft., T.D. 2,019 ft.
Cities Service 201 Wilson, 25 bbl., Kansas City lime, pay 1,980 ft., T.D. 2,022 ft.

North Ellinwood, Barton County: Bastin 1 Schwartz, N½ NW SE 21-19-11w, dry, T.D. 3,250 ft.

Greenvale, Russell County: Cities Service 1 Schwartz, 277 bbl., Gorham sand, T.D. 3,239 ft.

Hall-Gurney, Russell County: Texas 3 Neil, Sec. 36-14-14w, 1,331 bbl., Kansas City lime, acid, T.D. 2,965 ft.
Jones-Shelburne 3 Rein, S½ SE SE 27-14-13w, 320 bbl., Kansas City lime, acid, T.D. 2,881 ft.
Jones-Shelburne 3 Rein, S½ SW SW 27-14-13w, 867 bbl., Kansas City lime, acid, T.D. 2,881 ft.

Haverhill, Butler County: Cities Service 3 Reetz, SW NE SE 34-27-5e, dry, T.D. 3,187 ft.
Cromwell & Lewis 3 Reetz, NE SW SE 34-27-5e, 35 bbl., pay 3,109 ft. T.D. 3,118½ ft.

Hoffman, Barton County: Black-Marshall 2 Krier, E½ SE SE 18-17-11w, 49 bbl., Arbuckle, T.D. 3,307 ft.

Keesling, Rice County: Mabee 3 Miller, E½ NW NE 9-20-9w, 621 bbl., Arbuckle, T.D. 3,232 ft.

Koblitz, Ellis County: Skelly 2 Koblitz, E½ NE NE 22-12-18w, 252 bbl., Arbuckle, T.D. 3,697 ft.

Kraft, Barton County: Carter 3 Kroutwurst, NE SW NW 10-17-11w, dry, T.D. 3,372 ft.

Laton, Rooks County: Krueger 2-D Tatkenhorst, E½ NE NE 15-9-16w, swabbed 71 bbl., Lansing, T.D. 3,270 ft.

Lost Springs, Marion County: Ring-Mac 2 Kaiser, E½ NW SE 33-17-4e, 301 bbl., Mississippian chat, T.D. 2,415 ft.

McLouth, Leavenworth County: A. & B. Pipeline 1 Edmonds, SW SW 34 9-20e, 2,740,000 cu. ft. gas, Bartlesville 1,395-1,417 ft. and 1,425-43 ft., T.D. 1,447½ ft.

Otis, Rush County: Morgan, Flynn & Cobb 3 Schroeder, E½ NW SE 23-18-16w, swabbed 761 bbl., Reagan sand, T.D. 3,547 ft.

Potwin, Butler County: Phillips 3 Moore, SW SE SW 1-25-3e, 20 bbl., Mississippian lime 2,679 ft., T.D. 2,699 ft.

Prusa, Barton County: Republic 2 Harzman, N½ NE SE 33-16-11w, 3,000 bbl., Arbuckle, T.D. 3,330 ft.

South Prusa, Barton County: Gulf 1 Schneweis, N½ NE NE 7-17-11w, 1,812 bbl., Arbuckle, acid, T.D. 3,338 ft.

West Prusa, Barton County: Shell 3 Oeser, SE NW NW 17-16-11w, swabbed 66 bbl., Arbuckle, T.D. 3,303 ft.

Ray, Phillips County: Cities Service 1 Pinkerton, SW SE NE 31-5-20w, 1,088 bbl., Reagan, acid, T.D. 3,618 ft.

Raymond, Rice County: Branine 1 Thompson, S½ SW SW 17-20-10w, 1,090 bbl., Lansing, acid, T.D. 3,117 ft.

Rick, Barton County: Shell 1 Rader, NE NE 11-19-11w, 3,000 bbl., Kansas City lime, acid, T.D. 3,242 ft.
Hinkle 1 Wood, S½ SW SW 12-19-11w, dry, T.D. 3,411 ft.

Silica, Barton County: Shell E. Kowalsky, NE SE SE 18-20-11w, 3,000 bbl., Arbuckle, acid, T.D. 3,297 ft.
C. E. Ash 2 Koch-B, E½ E½ NE 23-20-12w, dry, T.D. 3,371 ft.

South Silica, Barton County: Buchanan Trustee 3-A Langfield, E½ NW SW 14-20-11w, 2,456 bbl., Arbuckle, acid, T.D. 3,289 ft.

West Silica, Barton County: C. E. Ash 2-B Schartz, E½ SE SW 7-20-11w, swabbed 51 bbl., Arbuckle, T.D. 3,319 ft.

Stoltenberg, Ellsworth County: Herndon 1 Jezek, E½ SE SE 7-16-10w, 232 bbl., Arbuckle, acid, T.D. 3,375 ft.

Trapp, Russell County: Shell 8 Batt, 35-15-14w, 129 bbl., Arbuckle, T.D. 3,342 ft.

West Trapp, Russell County: Phillips 2 Pauline, NE NW 15-15-14w, 82 bbl., Arbuckle, acid, T.D. 3,229 ft.

Wilcutt, Stafford County: Atlantic 1 Fannie Sharp, S½ SE NE 4-21-13w, 660 bbl., Lansing, acid, T.D. 3,408 ft.

Wilkins, Ellsworth County: Cities Service 11 Schroeder, W¼ W½ NW 29-17-9w, 384 bbl., Arbuckle, T.D 3,230 ft.

Zenith, Stafford County: Stanolind 4 Kirkpatrick, E½ NW NW 15-24-11w, 3,000 bbl., Viola, acid, T.D. 3,855 ft.
Landon 4 Union Central, N½ NW SW 1-24-10w, 2,295 bbl., Viola, acid, T.D. 3,752 ft.
Stanolind 5 Haves, S¼ NW SE 11-24-11w, 3,000 bbl., Viola, acid, T.D. 3,800 ft.

WILDCAT DRILLING REPORT

Western Kansas

Barber County: Pryor & Lockhart 1 Ishmael, S½ SE SW 35-34-11w, Arbuckle 5,339-54 ft., P.B. 4,727 ft., 2,000 ft. fluid in hole, swabbed 4 to 5 bbl. water per hr. for 8 hr., scum oil.
Deep Rock 1 Skinner, W½ NW SW 21-31-14w, drilling 810 ft.

Barton County: Helmerich & Payne 1 Unruh, E½ NE NW 16-20-15w, Arbuckle 3,720 ft., 5-in. 3,724 ft., standard tools 3,739 ft., shot 3,780-3,805 ft., est. 10 bbl. oil a day and 1,500,000 cu. ft. gas, drilling 3,815 ft.
Shields 1-A Kimpler, W½ NW NE 31-18-11w, Topeka 2,755 ft., drilling 2,805 ft.
W. O. Allen 1 Stoskopf, NW NW NW 29-16-13w, Arbuckle 3,373-75 ft., show oil, 5-in. 3,374 ft., standard tools.
Bartlett 1 Wondra, SE NE NE 5-17-13w, Ft. Riley 1,795 ft., Topeka 2,830 ft., Lansing 3,118 ft., Arbuckle 3,357 ft., cored saturation 3,359-61 ft., to run casing.

Cowley County: Mead Production 1 McMichael, NW SW SW 35-33-3e, Kansas City 2,865 ft., show oil 2,880 ft., drilling 3,070 ft.
Marylyn 1 Mosier, NW NW SW 21-34-7e, 8-in. 1,360 ft., underreaming 8-in. 1,590 ft.
Steinbuchel 1 Peck, N½ NW SE 23-34-5e, S.D. 1,600 ft.
Deep Rock 1 Daniels, SW SW NE 10-30-3e, Arbuckle 2,934-68 ft., cored show oil 2,948-68 ft., 5-in. 2,934 ft., standard tools 2,968 ft.
Palmer and Continental 1 Defore, SE SW SE 23-30-3e, first report.

Edwards County: Continental 1 Beatty, S½ SW 35-25-20w, Topeka 3,630 ft., Lansing 4,095 ft., drilling 4,343 ft.

Elk County: Allison 1 Porter, NW NE NW 25-28-8e, drilling 2,801 ft.

Ellis County: Darby 1 Dreiling, SE SE NW 28-13-17w, Arbuckle 3,521 ft., spotted saturation 3,527-34 ft., 7-in. 3,521 ft., perf. 3,285-94 ft., acid, bailed 1 bbl. water and 1½ gal. oil, more acid, pumped 2⅔ bbl. fluid an hr., cementing perf.
Darby 1 Giebler, E½ NW SE 27-13-20w, anhydrite 1,501 ft., 8-in. 1,520 ft.

Greenwood County: G. A. Fuller 1 Baker, E½ NE SW 17-26-13e, 8-in. 685 ft., 6-in. 883 ft., drilling 1,080 ft.
C. T. Welch 1 Crawford, NE SE SE 17-28-12e, 250,000 cu. ft. gas 267-300 ft., 8-in. 328 ft., Kansas City 890 ft. with show gas, 6-in. 890 ft., drilling 905 ft.
Jack Ray 1 Mitchell, SW NW NE 29-27-12e, Lansing 662 ft., drilling 740 ft.
Winkleman & Abels 1 Hillard, NE NE NW 27-27-11e, first report.
Riggs & Herbert 1 Forbes, SW NW NW 20-27-11e, drilling 475 ft.

Kearny County: Stanolind 1 Patterson, E½ SE SE 23-22-38w, Lansing 4,100 ft., Cherokee 4,420 ft., top sand 4,740 ft., base sand 4,751 ft., D.S. test 4,740-60 ft., open 20 min., 1,885 ft. oil and 185 ft. muddy water, gravity 35.5 at 78°, Mississippian lime 4,879-4,902 ft., T.D., 7-in. 4,806 ft., Viola 5,536 ft., Arbuckle 5,655 ft., T.D. 5,690 ft., no show, P.B. to 4,780 ft.

Marion County: Basinger 1 Janseen, NE NE SE 9-21-3e, drilling 675 ft.

McPherson County: Kiowa 1 Reusser, S½ SE SE 26-21-2w, Topeka 1,795 ft., Lansing 2,355 ft., drilling 2,922 ft.

Norton County: Helmerich & Payne 1 Hewitt, S½ SE NE 11-4-21w, Arbuckle 3,655 ft., granite 3,746 ft., T.D. 3,750 ft., P.B. 3,404 ft. in Lansing, swabbed 65 bbl. in 19 hr., small trace water, gravity 36.8 corrected, acid, swabbed 131 bbl. oil and 87 bbl. water in 14 hr., S. D. 12 hr., 450 ft. oil in hole

and 1,850 ft. water in hole, squeezed with 150 sacks, acid at 3,407 ft., swabbed 24 bbl. oil and no water in 2 hr., installing pump.

Helmerich & Payne 1 Wyatt, E½ NE NE 20-1-23w, Lansing 3,325 ft., show oil 3,321-28 ft., 3,365-69 ft. and 3,375-79 ft., slight stain 3,380-85 ft., live oil 3,385-90 ft., granite wash 3,577 ft., granite 3,610-15 ft., 5-in. 3,439 ft.

Cities Service 1 Boucher, NE NE NE 13-4-23w, surface pipe 325 ft.

Pawnee County: Max Cohen 1 English, SW SW NE 1-21-15w, surface pipe 470 ft.

Pratt County: Pryor & Lockhart 1 Bergner, NE NE NE 35-29-14w, T.D. 355 ft., 12½-in. 310 ft.

Reno County: Hall-Jordan 1-A Stucky, N½ NW SW 31-25-5w, first report.

Rice County: Ingling-Parker 1 Merkle, NE SW 1-20-9w, show gas 2,975-82 ft., show gas 2,989-3,000 ft., 4-in. 3,009 ft., perf. 2,960-97 ft., no show, acid, no test.

Continental 1 Johnson, SW NW NE 28-20-6w, first report.

Rocket 1 Shepherd, W½ NW NW 6-21-9w, first report.

Russell County: Central 1 Harbaugh, NW NW NW 21-14-12w, Lansing 2,898 ft., some show dead oil 2,932-38 ft., show oil 3,985-90 ft., H.F.W. 3,125-30 ft., 7-in. 3,149 ft., drilling 3,157 ft.

Barwick & Davis 1 Shrader, S½ SE SE 21-12-14w, Ft. Riley 1,715 ft., Florence 1,805 ft., Topeka 2,657 ft., drilling 2,700 ft.

Helmerich & Payne 1 Jennrich, W½ NW SE 13-12-14w, 10-in. 180 ft., show oil.

Phil-Han 1 Nev., NW SW SW 2-15-12w, drilling 340 ft.

Scott County: Atlantic 1 Rosine, NE NE 34-19-33w Heebner 3,850 ft., Dodge 3,860 ft., Lansing 3,895 ft., Marmaton 4,420 ft., cored sandy shale 4,575-85 ft., Cherokee 4,579 ft., cored shale and lime 4,585-4,602 ft., cored sandy shale 4,602-20 ft., Mississippian 4,609 ft., coring 4,657 ft.

Sedgwick County: W. C. Fees 1 Bartholomew, N½ NE SW 30-27-4w, Lansing 2,895 ft., Mississippian lime 3,721-72 ft., S.D.

Stafford County: Hamilton & Hawkins 1 Ward, NE NE SW 15-23-13w, Simpson 3,766 ft., Arbuckle 3,810 ft., show oil 3,810-14 ft., show oil in core 3,814-17 ft., 40 ft. oil in hole, acid, bailed ¾ bbl. oil in 2 hr., gravity 28.7, more acid, 1,200 ft. fluid in hole, 90 per cent water, cored porous dolomite with show oil 3,826-28½ ft. and 3,828½-31½ ft., 2,800 ft. water in hole, squeezed.

W. W. Drilling 1-A Wilson, N½ NW NW 5-25-14w, Viola 3,958-67 ft. with saturation, 7-in. 3,948 ft., bailed water and some show oil, acid, P.B. 3,965 ft., shot 3,960-65 ft., cleaning out.

Northeastern

Jefferson County: Sifers 1 Leonhard, SE SW 9-10-19e, first report.

Workman & Sherrod 1 Riling, SW SW SE 22-10-19e, first report.

Lauring et al 1 Petrie, NE SE SE 19-10-20e, sand 1,105-35 ft. with hole full of water, 8-in. 1,141 ft., drilling 1,142 ft.

Mosbacher et al 1 Stroud, SW NE 20-10-20e, first report.

Latest Well in Lower Hunton Sets Record Falls City Flow

ST. JOSEPH, Mo., Aug. 11.—At a time when the Falls City pool of Richardson County, Nebraska, was fairly well out of the news, the Ohio Oil Co. revived interest with a record breaker for the pool. Its 6 Bucholz in CWL NE SW 17-1n-16e flowed 255 bbl. of oil in 1¾ hours. The flow came from the so-called lower Hunton lime after casing was perforated from 2,272-80 ft. and acidized with 300 gal. This was at least 1,200 bbl. per day more than any well produced in the pool.

Ohio also deepened 1 Bucholz, the Nebraska bonus well, and announced that the lower Hunton was producing at the estimated gage of 840 bbl. a day.

NEBRASKA COMPLETIONS

Falls City, Richardson County: Ohio 6 Bucholz, W½ NE SW 17-1n-16e, Hunton 2,208 ft., perf. 4-in. at 2,272-80 ft., acid., flowed 255 bbl. oil in 1¾ hr.

Ohio 1 Bucholz, NW SW 17-1n-16e, old well drilled deeper to lower Hunton 2,217 ft., perf. 2,271½-78½ ft., T.D. 2,302 ft., 500 gal. acid, flowed 840 bbl.

Ohio 5 Bucholz, NE NW SE 17-1n-16e, 706 bbl., pay 2,291-2,295 ft., T.D. 2,313 ft.

Skelly Oil 4 Davisson, CNL NW NW NE 20-1n-16e, 624 bbl., pay 2,282-86½ ft., T.D. 2,335 ft.

Schubert, Richardson County: Black Gold Oil 1 Bankers Life, SE SW 30-3n-16e, 137 bbl., Hunton 2,524-33 ft., 2,546-51 ft., T.D. 2,671 ft.

NEBRASKA DRILLING REPORT

Harlan County: Veeder Supply & West 1 Battin, N½ SE NW 15-2n-18w, 10-in. 197 ft., Lansing 3,385 ft., some show oil 3,385-90 ft., show oil 3,540-60 ft., some show oil 3,575-80 ft., conglomerate 3,770 ft., Viola 3,858 ft., Simpson 3,985 ft., Arbuckle 4,046-4,202 ft., electrical log, T.D. 4,208 ft., 7-in. 3,631 ft., top cement 3,390 ft.

Veeder Supply 1 Alter, W½ SW NW 15-1-18w, 10-in. 208 ft., drilling 300 ft.

Richardson County: Harry Harper 1 Horn, S½ NE SE 35-3-16e, Lansing 917 ft., Mississippian lime 2,095 ft., Hunton 2,498 ft., cored 2,494-2,535 ft., some show oil 2,509-27 ft., and 2,527-30 ft., cored 2,545-58 ft., show black oil, cored 2,558-76 ft., stain, S.D. 2,600 ft.

Uhri 1-A Ogle, NW SE SE 9-1-14e, old well, Hunton 2,258 ft., T.D. 2,264 ft., P.B. 2,252 ft., butane and acid, pumped 125 bbl. fluid in 24 hr., cut 30 per cent water, installing pump.

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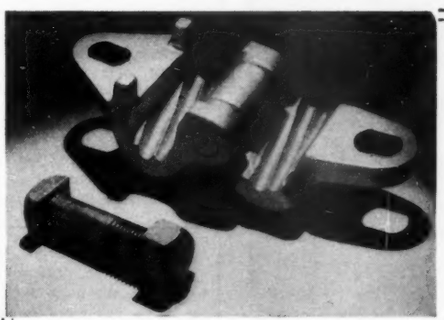

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Production Test Scheduled At 8,500-Ft. Wildcat

By R. MARNE SANFORD

DALLAS, Tex., Aug. 11.—Completion attempts are scheduled for early this week at a deep 8,500-ft. wildcat test in Henderson County. It is British American Oil 1 Young, Joseph Rice Survey, in the Malakoff sector of the southwestern part of the county. The hole was drilled as a "tight" operation, thus little information is at this time available, however, several shows of oil worthy of testing are confirmed by the fact that casing is being moved to the drill site.

The wildcat, bottomed at 8,500 ft., is given the best chance for production from the Rodessa section of the Glen Rose lime. It was reported the electrical survey of the hole indicated zones of porosity and possible gas-distillate production from 7,605-31 ft., 7,730-58 ft., and 7,771-72 ft. The middle section was believed to have been the most likely productive. Whether shows of oil or gas were found in the deeper Pettit lime or Travis Peak sections could not be learned. Should commercial production be developed it will be the first below the Woodbine sand for the county.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil: East Texas field	8	276	28,769
Hawkins	2	700	9,599
Other fields	1	313	4,100
Gas: Fields	1	*16.5	5,700
Dry: Fields	1	.....	2,730
Wildcats	2	.....	6,257
Total	15	.....	58,155

*Million cu. ft.

Camp County Deep Field Extension Probable

First major extension for the deep Travis Peak level Pittsburg field, opened 2 years ago in Camp County, was seen at the close of the week when a mile west outpost cored saturated sand in the deep zone. The test is Talco Asphalt & Refining 1 McKenzie, Williams Survey, which is the third operation for the field, there being two wells completed. It cored 6 ft. of Travis Peak pay from 7,959 to 7,965 ft., present total depth. The core hole is being reamed down after which casing will be set before drilling further into the pay.

Pleasant Grove Development Speeded by Outlet

Rusk County's Pleasant Grove field, Woodbine sand-producing area southwest of Henderson, was set for a pipe-line outlet as Texas Pipe Line Co. started laying a lateral from its trunk carrier about a mile from the field. There are two completed wells in the field and several more drilling. Continued development is assurd with the new outlet.

Meanwhile a west-side outpost to the field showed unfavorably. It is McMillan 2 Pool, 935 ft. west of the discovery well and in the May Survey. The cutting of a fault is believed the cause for this outpost having not encountered the productive section at its normally expected depth. It is drilling below 4,106 ft., some 88 ft. below the 4,018-ft. point at which the pay was expected. Derrick is being built for a southeast outpost and materials are being moved in for a west offset to the 1 Evans.

Upshur County Wildcats Active

The Big Sandy sector of Upshur County was again drawing interest as one wildcat was drilling ahead toward the Woodbine sand and another was preparing to resume operations. The active test is W. W. Bradley 1 Robinson, John Sanders Survey, drilling below 2,722 ft. A mile southwest of Big Sandy A. M. Sutton and R. B. Baugh have taken over the old Strickland & White 1 Dell Gorman, S. G. Slayton Survey, and are preparing to carry the hole to the Paluxy sand level. The test has been idle since the middle of May when the first operators halted drilling at 1,870 ft. after unsuccessfully testing the Nacatoch sand at 1,400 ft.

EASTERN TEXAS COMPLETIONS

Wildcats

Anderson County: Huddleston & Prater 1 Pfaff, R. Allen Sur., 5 mi. NW Palestine, dry at 1,604 ft.
Van Zandt County: Hickok & Reynolds 1 Bush, P. Young Sur., 4½ mi. SW Tundra, dry at 4,653 ft.

East Texas Field

Longview, Gregg County: Shell 31 Hampton, 42 bbl., perf. casing 3,650-55 ft., T.D. 3,725 ft., P.B. 3,698 ft.
Kilgore, Gregg County: R. H. Dearing & Son 5 Laird, 40 bbl., 3,546-74 ft.
J. E. Kemp 5 Rider, 25 bbl., 3,542-60 ft.
J. E. Kemp 5 Rider, 25 bbl., 3,542-59 ft.
Magnolia 28 Griffin, 15 bbl., 3,541-3,610 ft.
J. Simmons 3 Martin, 55 bbl., 3,542-59 ft.
G. R. Starns 39 Money, dry at 3,730 ft.
Sun Oil 20 Pendecost, 37 bbl., 3,575-90 ft.
Joiner, Rusk County: J. L. Collins 12 Pinkston, 30 bbl., 3,613-19 ft.

Other Fields

Hawkins, Wood County: Humble 1 Smith, 107 bbl. in 6 hr., ¼-in. choke, T.D. 4,822 ft.
Humble 1 Missionary First Baptist Church, 112 bbl. in 6 hr., ¼-in. choke, 4,566-4,745 ft., T.D. 4,777 ft.
Pleasant Grove, Rusk County: M. D. Bryant 1-A Evans, 313 bbl. in 24 hr., ¼-in. choke, T.D. 4,100 ft.
South Groesbeck, Limestone County: Cannon Barron 1 fee, 16,500,000 cu. ft. gas daily, small amount of distillate, T.D. 5,700 ft.

EAST TEXAS ACTIVE WILDCATS

Camp County: Talco Asphalt Co. 1 McKenzie, L. Williams Sur., ¾ mi. W of Pittsburg field, 7-in. casing at 7,947 ft., drilling plug, T.D. 7,965 ft.
Cherokee County: Bobby Manziel 1 Limber Log School, 4,100 ft. from S and 9,500 ft. from E lines John Vaughn Sur., 4 mi. SW of Bullard, drilling 4,900 ft.
Franklin County: W. B. Hinton 1 Hargrove, 467 ft. E and S NE cor. C. C. Dupree Sur., 8-in. casing at 203 ft., drilling 2,160 ft.
Gregg County: Roger Lacy 1 Flannigan, 9,450 ft. S and 1,555 ft. from W lines H. Edwards Sur., 8 mi. S Willow Springs, drilling 7,020 ft.
Henderson County: British American Oil 1 Young, Joseph Rice Sur., 7½ mi. SW Athens, drilling 8,474 ft.
Lone Star 2 Allen, 3,490 ft. from W and 4,780 ft. S lines John Lawson Sur., 13⅜-in. casing at 190 ft., T.D. 2,414 ft.
A. J. Tyler 1 Dozier, 2,100 ft. from W and S lines G. T. Walters Sur., 12½-in. casing at 105 ft., T.D. 2,587 ft.
Houston County: T. C. Chism and G. L. Porter 1 P. D. Austin, Frank Johnson Sur., 1½ mi. SW Crockell, drilling 3,335 ft.
Lamar County: Whitehead & Dahl 1 Barr, old well drilling deeper, 80 ft. N and 442 ft. W NE cor. I. Boren Sur., old T.D. 2,375 ft., drilling 2,425 ft.
Limestone County: B. F. Weekly A-2 Barron, 660 ft. out of NE cor. 320-ac. tract in E Mabry Sur., drilling 30 ft.
Navarro County: Topaz Oil E-1 Trammell, 330 ft. from NE and 1,280 ft. from SE lines William P. Bass Sur., 10-in. casing at 101 ft., drilling 2,612 ft., first report.
Rusk County: G. C. Gasty 1 Kangarga Bros., 467 ft. from SE and 1,170 ft. from NE lines 100-ac. tract in T. Wood Sur., 8 mi. W and N of Laneville, waiting on permit to drill.
R. S. Kirby 1 Richardson, 467 ft. from N and E lines Blk. 5, J. I. Sanches Sur., waiting on cement.
Smith County: Sun Oil B-1 Sanders, 648 ft. from N and 1,000 ft. from W lines 81.53-ac. tract in Matthew Arnold Sur., 2 mi. SW of Chapel Hill, drilling 4,832 ft.
Upshur County: William Bradley 1 Robinson, 2,400 ft. from W and 5,075 ft. from N lines John Sanders Sur., 10-in. casing at 200 ft., drilling 4,040 ft.
Wood County: Roger Lacy 1 Snyder, old well drilling deeper, old T.D. 1,750 ft., 2,000 ft. from N and 300 ft. from E lines E. Castleberry Sur., 2½ mi. E Hawkins, drilling 1,780 ft.
Bobby Manziel 1 Barney Holmes, 834 ft. from S and 280 ft. from W lines T. L. Rusk Sur., derrick.
N. P. Powell 1 Markey & Miller, 467 ft. out of the SW cor. H. H. Edwards Sur., prepare to abandon, holding for Woodbine marker.
Fred Strang 1 Old, 467 ft. from S and 644 ft. from W lines 317-ac. tract in J. R. Smith Sur., drilling 4,906 ft.

TEXAS GULF COAST

Five New Wildcats Staked In Exploration Campaign

By NEIL WILLIAMS

HOUSTON, Tex., Aug. 11.—Wildcat activity along the Texas Gulf Coast district continued to increase as locations for five interesting wells were announced. Three of the locations were in Brazoria County and one each in Jefferson and Matagorda counties.

On the north flank of the Stratton Ridge salt dome, southeast Brazoria County, location for a deep test was announced by the Sterling Oil & Refining Co. The well is 1 Fred Shank, 6,991 ft. from the west line and 699 ft. from the north line of a 150-acre lease in the John Brown Survey. This structure is one of the largest salt domes in the district and, while some production has been secured from shallow sands, it has been short lived and at the present time no wells are on production. The present well is situated about 3,000 ft. northeast of the same company's 1 Kramer, a 5,100-ft. dry hole drilled in 1938, and location for the second test was made after the area was rechecked with geophysical instruments.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: West Ranch	4	1,170	22,536
Other fields	17	3,999	112,890
Dry holes: Fields	3	.....	29,498
Total	24	.....	164,924

Location for a 7,500-ft. wildcat was announced for the Rattlesnake Mound prospect by Humble Oil & Refining Co. The well is 1 Houston Farm Development Co., 500 ft. northeast of the northeast line of Chocolate Bayou and 2,279 ft. southeast of the southeast line of Texas Co. 500-acre lease in the Perry & Austin Survey. This places the well about 5½ miles southwest of Strake 1 Griffith, a deep test recently abandoned in the Halls Bayou area after logging encouraging showings.

West of the town of Alvin, location for another Frio sand test was made by Humble Oil & Refining Co. 1 R. L. Colley, 467 ft. from the southwest line and 448 ft. from the southeast line of the Leon H. Blum land in the J. M. O'Donnell Survey. The location is about 1½ miles northwest of the company's 1 Hiram Moore, an 8,600-ft. dry hole drilled in 1939. This area has been worked extensively with geophysical instruments, and has been looked upon as a favorable prospect for several years.

Another attempt to find commercial production around the flanks of the Big Hill dome, Jefferson County, will be made by Stanolind Oil & Gas Co. which staked location for 1 George Anderson located on a 159-acre tract in the T.&N.O. Survey. Several tests drilled on this dome have shown promise of production, but successful development has been hindered by a thick section of heaving shale.

Approximately 1½ miles west of the Wilson Creek field, Matagorda County, Barnsdall Oil Co. has let contract for 1 Mrs. C. T. Doman in the G. J. Williams Survey, a projected 10,000-ft. test.

Texana Wildcat Reported Showing for Producer

Although not confirmed, reports were circulated that Sinclair Prairie 1 J. Volkmer, a wildcat located in the Texana area, Jackson County, had recovered pipe-line oil on a drill-stem test below 5,145 ft. The well is located south of the town of Texana in the Francis F. Willis Survey, and no information was being released by the company.

Gas-Distillate Production Extended at Clodine

Gas-distillate production in the newly opened Clodine field, Fort Bend County, was extended several hundred feet north with the completion of Houston Oil Co. 1 E. E. Thompson, in the H. D. Brown Survey. Drilled to a total depth of 7,577 ft., production was obtained by perforating casing at 7,463-74 ft., and on a 24-hour gage the well flowed 22 bbl. of distillate daily through a ¼-in. choke. Tubing presure was 1,250 lb., and casing pressure 2,750 lb. The sand in this well was found slightly higher than the discovery well, completed several weeks ago at 7,499-7,502 ft.

Peach Bend Wildcat Is Dry

In the same county, and located in the Peach Bend area, H. C. Cockburn 1 W. C. Leveridge, J. M. McCormack Survey, is shut down for orders and may be abandoned after two production tests through perforated casing at 3,077-82 ft., and 3,165-70 ft. tested salt water. This well was drilled to a total depth of 7,880 ft., and casing was cemented after side-wall cores showed promise of production in sand at 3,075 and 3,171 ft.

Fig Ridge Field Extended West

An important extension was marked up for the Fig Ridge field, Chambers County, as Texas 1 D. L. Broussard, ¾ mile west of production, flowed 32 bbl. of pipe-line oil per hour through a ¼-in. choke from perforated casing at 8,568-85 ft. The well was originally drilled to a total depth of 9,200 ft., and was plugged back, sidetracked and redrilled to a depth of 8,600 ft. This marks the first completion in the field other than those completed by Sun Oil Co. In the same county and located in the Oyster Bayou field, Sun Oil Co. is preparing to run casing in 4 Felix Jackson, several hundred feet from the discovery well. Total depth is in oil sand at 8,291 ft., with the top of the section logged at 8,200 ft.

TEXAS GULF COAST COMPLETIONS

Alta Loma, Galveston County: Stanolind 4 Hulen, dry, T.D. 10,532 ft.

Anahuac, Chambers County: Humble 58 Middleton, 377 bbl., ¼-in. choke, T.D. 7,230 ft.

Dyersdale, Harris County: J. Frazier 1 Hass, 124 bbl., ¼-in. choke, sand 4,075-80 ft.
F. A. Gillespie 1 R. L. Ezzell, 284 bbl., ¼-in. choke, perf. casing 4,044-59 ft., T.D. 4,075 ft.

Eureka, Harris County: Jack Frazier 8 Realty, dry, T.D. 8,966 ft.

Fig Ridge, Chambers County: Texas 1 D. L. Broussard, 768 bbl., ¼-in. choke, perf. casing 8,568-85 ft., T.D. 9,200 ft.

Ganado, Jackson County: Texas 1 Mortgage Land & Investment Co., 86 bbl., 6/64-in. choke, perf. casing 6,402-04 ft., T.D. 6,522 ft.

Lolita, Jackson County: W. L. Goldston 3 Missouri Pacific, 75 bbl. oil and 67 bbl. water, ⅛-in. choke, perf. casing 5,288-98 ft., T.D. 6,408 ft.
Shell 4 Wiloughby, 97 bbl., ⅛-in. choke, T.D. 5,292 ft.

Luckv, Matagorda County: Stanolind 1 Doman, dry, T.D. 10,000 ft.

Maurbro, Jackson County: Humble 7 Fred S. Robbins, 504 bbl., ¼-in. choke.

North Markham, Matagorda County: Ohio 7 Carlson, 204 bbl., ⅛-in. choke, perf. casing 8,966-70 ft., T.D. 8,101 ft.

Old Ocean, Brazoria County: Stanolind 1 First Capital State Bank, 125 bbl. oil plus 20 per cent salt water, ¾-in. choke, perf. casing 9,668-78 ft., T.D. 10,750 ft.
Harrison & Abercrombie 3-C Bernard River Land Co., 410 bbl., ¼-in. choke, T.D. 10,858 ft.

Tomball, Harris County: Humble 4 Kraha, 463 bbl., ¼-in. choke, T.D. 5,560 ft.

Turtle Bay, Chambers County: Stanolind 3 White, 40 bbl., ⅛-in. choke, perf. casing 6,612-17 ft., T.D. 6,627 ft.

West Columbia, Brazoria County: Texas 41 Abrams, 101 bbl., ¼-in. choke, perf. casing 5,620-30 ft., T.D. 5,647 ft.
Texas 25 J. G. Phillips, 131 bbl., 6 hr., ¼-in. choke, perf. casing 5,545-70 ft., T.D. 5,584 ft.

West Ganado, Jackson County: Pure 2 J. R. Cravens, 102 bbl., 8/64-in. choke, perf. casing 5,453-58 ft., T.D. 5,475 ft.
Pure 2 Cravens, 108 bbl., ⅛-in. choke, perf. casing 6,004-15 ft., T.D. 6,243 ft.

West Ranch, Jackson County: Humble 3 Vanderbilt-State, 336 bbl., ¼-in. choke, perf. casing 5,715-23 ft., T.D. 5,728 ft.
Magnolia 73-A West Ranch, 385 bbl., ¼-in. choke, perf. casing 5,730-37 ft., T.D. 5,743 ft.
Magnolia 177-A West Ranch, 276 bbl., ¼-in. choke, perf. casing 5,528-40 ft., T.D. 5,560 ft.
Stanolind 10 L. Ranch, 173 bbl., ⅛-in. choke, perf. casing 5,440-45 ft., T.D. 5,505 ft.

TEXAS GULF COAST DRILLING REPORT

Brazoria County: Pure 1 T. L. Smith, J. E. B. Austin Sur., driving piling.

Colorado County: W. R. Davis 3-A L. E. Brownston, Wilcox test, Garwood field, drilling shale 8,659 ft.

Jackson County: W. S. Boyle et al 1 L. W. Sartain, P. Gallardo Sur., rigging up.
Salt Dome 1 Zapalac, V. Garcia Sur., rigging up.
Sinclair Prairie 1 J. Volkmer, Francis Miller Sur., coring shale 5,127 ft.
Texas 1 V. F. Kolle, J. M. Crabb Sur., drilling shale 3,004 ft.

Jefferson County: British American 1-C State, Sabine Pass field, coring shale 4,997 ft.
Humble 1 Gallier, T.&N.O.R.R. Sur., coring shale and sand 7,350 ft.

Liberty County: J. Frazier 4 Lynott-Buffum, Wilcox test, Hardin field, drilling shale 6,330 ft.

Montgomery County: Atlantic 1 Foster Lumber Co., Pressley Gill Sur., drilling shale and sand 7,793 ft.
Continental 1 Foster, Jose M. de la Garza Sur., drilling shale and lime 5,393 ft.
Glenn McCarthy 1 Roscoe Sayle, J. Scott Sur., drilling shale 5,428 ft.

Orange County: Superior Oil Corp. 1 East Beaumont Townsite Co., Nancy Davis Sur., drilling salt water and sand 6,137 ft.

Indiana Fields

(Continued from Page 70)

Jesse Wilson et al 1 McCoy, S½ NE NE NE 12-7s-8w, set 10-in. 72 ft., drilling 270 ft. in new hole, cable tools.

Sullivan County: O. A. Thayer 1 Wickey, NE NW 7-7n-9w, location, first report.
T. H. Drake 1 Curry, NE NW 11-9n-8w, first report, 12-in. 110 ft., 10-in. 308 ft., 8-in. 803 ft., drilling 1,000 ft.
E. M. Self 1 James Land, NE NE NE 36-7n-9w, drilling 1,450 ft. in H.F.W.

EASTERN KENTUCKY

ASHLAND, Ky., Aug. 11.—Two oil well completions with a combined daily production 25 bbl. are included in the report of eastern Kentucky drilling activities this week. Eleven gas wells have been completed and the report cites a combined daily production of 7,261,000 cu. ft. of gas.

Drilling activities continue on the same upward level with a number of new locations being put into shape for immediate drilling while other locations are being made.

COMPLETIONS

Martin County

Virginian 3 W. J. Parks, Big Crooked Creek, T.D. 1,142 ft., 10 bbl. oil daily.

Virginian 1300-V fee-3, T.D. 1,151 ft., 15 bbl. oil daily.

Virginian 1 A. J. Stepp, Black Log, T.D. 1,217 ft., 500,000 cu. ft. of gas daily.

Warfield 4445 Mable Agassiz, Middle Fork, T.D. 3,321 ft., 134,000 cu. ft. gas, shale.

Knott County

Kentucky-West Virginia 5308 William Tripplett, Long Fork of John's Branch, 112,000 cu. ft. of gas per day.

Warfield 5019 Farris Hayes, Ushback Branch, T.D. 3,016 ft., 315,000 cu. ft. gas, shale.

Floyd County

Kentucky-West Virginia 625 Ben Burga, T.D. 2,635 ft., 110,000 cu. ft. gas Big lime, 467,000 cu. ft. gas from shale.

Kentucky-West Virginia 5309 T. T. Hendricks, Cow Creek, T.D. 2,779 ft., slate, dry hole.

Pike County

Columbian 854-GW 6 Benton Smith, Benton Branch, T.D. 2,132 ft., 2,711,000 cu. ft. gas daily, Maxon.

United Carbon 936 Bud Justice-1, Billy Hollow, T.D. 3,764 ft., 140,000 cu. ft. gas daily, shale.

United Carbon 944 Myrtle F. Polley, Stone Branch, T.D. 2,202 ft., 622,000 cu. ft. gas daily, Big lime.

United Carbon 678 Colony-24, Right Fork Island Creek, T.D. 3,529 ft., 539,000 cu. ft. gas, Brown shale.

Knox County

Petroleum Exploration 1 Stratton Campbell, Stinking Creek, T.D. 2,080 ft., 1,200,000 cu. ft. gas daily, Corniferous.

WESTERN KENTUCKY

Breckinridge County

Easton district: Porter Evans 7 Keenan heirs, drilling at 250 ft.

Hancock County

Floral district: W. A. Batten 2 Hiliary Remington, 10 bbl., shot 40 qt., Jett sand, 402-26 ft., T.D. 506 ft.

Easton district: Porter Evans 2 Stroud DeWitt, drilling at 175 ft.

Henderson County

Niagara district: Schneider & Gwin 2 Bettie Moss, moving in.

McLean County

Southwest Livermore district: Ellis 7 Stevens heirs, testing, flow and swab 15 bbl. per hr., first 2 hr., McClosky 1,628-63 ft.

Ohio County

Aetnaville district: DeHart et al 2 A. Phillips, 7 bbl., shot 30 qt., Jett sand, 406-19 ft., T.D. 422 ft.

Pleasant Ridge district: W. Wilkins et al 3 Addie Westerfield, 50 bbl., shot 80 qt., Jett sand, 820-60 ft.
W. Wilkins et al 1 W. W. Moseley, rigging up.

Davidson Station district: Evans & Stone 1 Jake Smith, dry hole, T.D. 254 ft.

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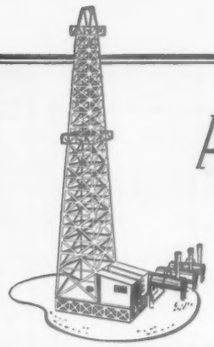

Among the Drilling

HALL-BAKER CO. is moving out tools at Holly Sugar Co.'s wildcat test north of Willows in Glenn County, California's northernmost wildcat. The test was abandoned at 4,329 ft., since no favorable indications had been found at the expected depths. C. W. Comstock was in charge of the work for the sugar company. The location was in 32-22n-1w.

RUTHERFORD Drilling Co., Houston, Tex., received contract from the Barnsdall Oil Co. for 1 Mrs. C. T. Doman, a wildcat to be drilled about 1½ miles west of the Wilson Creek field, Matagorda County, Texas. Location is in the G. J. Williams Survey, and the well is expected to be drilled to a depth below 10,000 ft.

LUPHER Drilling Co., Mount Pleasant, Mich., is in various stages of drilling or has been awarded contract for 11 wells in the Reed City pool of Osceola County, Mich. For Pure Oil Co. the contractor has five rigs drilling and has material on ground or derrick erected for five other wells.

KEPLEY Production Co., San Antonio, Tex., has taken contract to drill a Pettus sand test to approximately 5,400 ft., west of San Diego in Duval County, Texas. Joe Palmer is the operator and the location will be on the Atlee Parr farm, 467 ft. from the north and west lines of Survey 13. Acreage for the wildcat operation was obtained from Arkansas Fuel Oil Co. and Taylor Refining Co. on a farmout basis.

DANCIGER Oil & Refining Co., Fort Worth, Tex., is moving a rotary 10 miles north of Greensburg in St. Helena Parish, Louisiana, for Humble Oil & Refining Co. 1 Great Southern Lumber Co. in 20-1s-5e. This is the first activity reported for this parish in several years and the progress of the well will be watched with much interest.

HELMERICH & PAYNE, Inc., Tulsa contracting and operating firm, has abandoned 1 Slaughter, Lot 78, League 136, Armstrong County School Land, a wildcat test in central Cochran County, Texas, after finding sulfur water at 4,828 ft., which increased in drilling to 4,895 ft.

M-B-K Drilling Co., Tulsa, composed of M. T. Myers, Harry J. Brown and Homer Keegan, drilled two interesting wildcats in the Tecumseh Lake region of Pottawatomie County, Oklahoma. They were M. T. Myers et al Johnson-Utter, NE SE NE 34-10-3, and Ernest Lippert 1 Rosebush, NE SE SW 34-10-3, neither of which was successful.

ROBERT W. ATHA, drilling contractor and operator of Mount Pleasant, Mich., has been awarded contract and is building rig for Sun Oil Co. 3 McKenna et al in the Hamilton field of Clare County, Michigan. The contractor also is drilling below 2,350 ft. at Gulf Refining Co. 2 Jewett in the Reed City field of Osceola County, Michigan, and is completing Gulf's 1 Fred Wendt in the Kawkawlin area of Bay County, Michigan.

OAKWOOD Drilling Co., Oklahoma City, Okla., has been awarded contract for Bruce Sullivan's wildcat test in Foard County, Texas, on acreage obtained on a farmout agreement from British American Oil Producing Co. Contract calls for drilling to 6,000 ft. Tentative location has been made in the J. M. Seaton Survey, 4 miles south of Crowell, Tex., 12 miles east of the Johnson field and 7 miles southwest of the Thalia pool. Oakwood has taken another contract to drill a 4,200-ft. wildcat test in Cottle County, Texas, for Mr. Sullivan and Hill & Hill, all of Fort Worth, Tex.

E. V. HILLIARD has the contract for the 1 Mary Puls, C N½ NW NW Section 1, Clare County, Michigan, being drilled by Mogul Oil Co., Detroit, Mich.

McCLANAHAN OIL CO., Mount Pleasant, Mich., last week logged a show of oil in the top of the Traverse at Sun Oil Co.'s wildcat in the Sylvan Township of Roscommon County, Michigan, and was shut down for test. The wildcat, Sun 1 Bauman, in C N½ SW NE 29-24n-1w, picked up the lime at 2,106 ft. and shut down at 2,126 ft.

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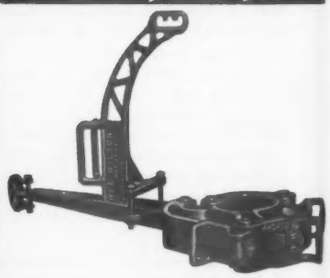

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Contractors

BELL & LOFFLAND, INC., have spudded in near Raisin City, Calif., to drill a wildcat for Amerada Petroleum Corp. to be known as 31-34 Clover. It is located in 34-16-17 near the Southern Pacific Helm station and is 10 miles southwest of the new Raisin City field recently discovered by Shell Oil Co., Inc.

BREWSTER-BARTLE Drilling Co., Houston, Tex., has started drilling operations on a new contract for Rio Bravo Oil Co. in the Esperson field, Liberty County, Texas. Contract was also received from the same company for 6 Fontane in the Saratoga field, Hardin County, Texas. One rotary is running in the Hawkins field for the Navarro Oil Co., and another is located in the Bayou Blue field for the same company. In St. Landry Parish, Louisiana, the contractors' 1 Richard, a wildcat, is drilling in shale below 5,345 ft.

O'CONNER Drilling Co. is moving in rig to start Fred T. Haddock and Kenneth V. Moore 1 Hert. The wildcat test is in SW NE SE of 22-15-3e, northeast of the Sporn pool of Lincoln County, Oklahoma.

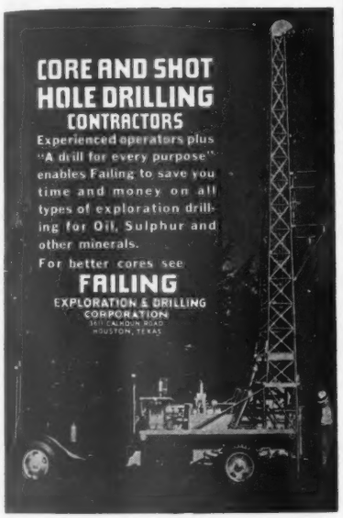
HARRY L. EDWARDS Drilling Co., Houston, Tex., is drilling below 6,000 ft. on Continental 1 Foster Lumber Co., a projected deep Wilcox test in Montgomery County, Texas, while on the northwest flank of the Pine Prairie dome, Evangeline Parish, Louisiana, drilling continues below the 8,200-ft. pay in Pan American 1 Guillory. Pan American 1 Calcasieu National Bank, a wildcat located in the Moss Lake area, Calcasieu Parish, Louisiana, is being abandoned at a depth below 10,400 ft., while in the Dickinson and Old Ocean fields completions were made for Pan American, Coast Petroleum Co., and Harrison & Abercrombie.

W. B. OMOHUNDRO, of Wichita Falls, Tex., has contracted to drill Larry Hults and Tom B. Owens (Fort Worth, Tex.) 1 J. A. Brite, a northwest offset to their discovery well in the Hults & Owens pool of southwest Montague County, Texas. The location is 467 ft. from the south and east lines of Block 2820, T.E.&L. Survey.

McQUEEN & CLEVENGER, Houston, Tex., are running casing in Fohs Oil Co. flank test located on the Gueydan dome, Vermilion Parish, Louisiana.

H. J. DeARMAN, Houston, Tex., is moving a rotary to the Marksville area, Avoyelles Parish, Louisiana, for a wildcat to be drilled for Joe Humphries. Another operation is reported in Washington County, Texas, for Eastern States Oil Co.

Drilling crew of Fain-Porter Drilling Co. working at Guthrie, Okla. Crew members are L. H. Reynolds, pipe racker; W. D. Robinson, cathead man; E. D. Morgan, backup man; C. N. Hughes, driller and H. W. Queen, derrick man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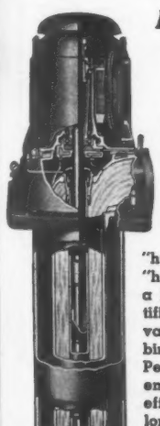

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Second Pay Zone Is Opened In Aux Vases at Flannigan

By STAFF CORRESPONDENT

MATTOON, Ill., Aug. 11.—The Aux Vases sand was definitely proved as the second pay in Hamilton County's new Flannigan field last week when Kingwood 1 Johnson, NE SE NE 14-6s-5e, swabbed and flowed 460 bbl. of oil, natural, from this formation in a recent 24-hour test. When testing started early last week the well swabbed only 4 bbl. an hour, but production has been rapidly increasing during the week. At latest reports operators were swedging casing after a bridge formed following a shot of nitro. Shell 1 Ventrees, SW SW SE 12-6s-5e, ½ mile northeast of 1 Johnson, now producing about 600 bbl. of oil daily from the Levias at 3,188-98 ft., also carried a show in the Aux Vases estimated as good for at least 100 bbl. daily.

Five new tests are now under way in the area and new locations are increasing rapidly despite the fact that prices have jumped from $10 per surface acre to as much as $500 per royalty acre. Shell 8 Ventrees, a new test near completion in the field, is reported to have flowed 794 bbl. in 24 hours following an acid treatment in the Levias.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Benton	6	1,515	12,964
Dale	4	2,261	12,144
Johnsonville	4	9,407	12,230
Louden	4	815	9,147
Mount Carmel	4	666	8,526
North New Harmony	6	1,463	16,765
Roland	5	1,278	12,042
South Woodlawn	2	1,098	3,955
Other pools	24	4,144	58,490
Wildcats	1	1,158	3,194
Dry holes: Fields*	8	.....	18,107
Wildcats	16	.....	40,662
Total	84	.....	208,226
Gas input wells	2	.....	3,076
Recompletions	4	698	.....

*Olson 1, Louden 2, Benton 1, North Boos 1, Allendale 1, Irvington 1, South Clay City 1.

Devonian Drilling in Louden Encouraged by Recent Wells

The showing of recent Devonian completions in the Louden field of Fayette County has encouraged new operators to enter the Devonian campaign and other operators to increase their operations. Water has so far discouraged rapid development of this formation but recent wells are being completed with no water production. Most of the Devonian wells now drilling are located in Sections 16, 20, 21, 22, 28 and 29-8n-3e. Exceptions are Jarvis Brothers 1-D Yakey, 6-7n-3e, and Union Petroleum Products 5-D Morrison, 8-7n-3e. Despite many weeks of testing 1-D Yakey has been unable to obtain commercial production. No. 5-D Morrison, however, had excellent saturation in four breaks in the Devonian before setting casing and is now getting ready to start testing these breaks. Completion of this test is being eagerly awaited by independent operators holding acreage in the central and southern part of the field.

WILDCAT COMPLETIONS

Bond County: Schwarz 1 Studebaker, SE SE SW 21-6n-2w, dry at 3,206 ft., Glen Dean 695 ft., Cypress sand 832 ft., Benoist 986 ft., Ste. Genevieve 1,066 ft., Salem 1,286 ft., Chattanooga 2,148 ft., Devonian 2,252 ft., sand 2,265 ft., Trenton 3,144 ft., Maquoketa 2,946 ft.

Clinton County: A. W. Gearson 1 H. Bilkhart, SW NW NW 22-1n-5w, dry at 3,217 ft., P.B. 1,290 ft.

Fayette County: F. Bridges 1 Fiscus, NE NE SW 21-4n-1w, dry at 1,544 ft., Glen Dean 1,101 ft., Cypress 1,255 ft., Benoist 1,402 ft., Renault 1,445 ft., Aux Vases 1,466 ft., Ste. Genevieve 1,539 ft.

Franklin County: Margrave 1 Bethel Church, NW NW NE SW 1-7s-2e, dry at 2,150 ft.

J. A. Burhans 1 Viehl, E½ NE SW 12-5s-3e, dry at 3,292 ft., Golconda 2,646 ft., Barlow 2,740 ft., Cypress sand 2,814 ft., Paint Creek 2,912 ft., Benoist 3,033 ft., Ste. Genevieve 3,092 ft., McClosky 3,193 ft.

Gallatin County: J. H. Wall et al 1 Mossman, S½ NW SW 7-9s-8e, dry at 565 ft.

Hamilton County: Texas 1 A. G. Johnson, W½ SE NW 22-6s-6e, dry at 3,355 ft., Kincaid 1,935 ft., Menard 2,285 ft., Glen Dean 2,512 ft., Cypress sand 2,790 ft., Benoist 3,009 ft., Fredonia 3,221 ft., St. Louis 3,342 ft.

Shell 1 Ventrees, SW SW SE 12-6s-5e, flowed 1,158 bbl., 5,000 gal. acid, Ste. Genevieve 3,144 ft., Levias 3,188-98 ft., T.D. 3,194 ft. *DISCOVERY WELL OF BRADEN POOL.*

Jefferson County: Shelburn 1 Oldham, NW NW NW 12-1s-1e, dry at 2,166 ft.

Nation 1 Chesnick, SW NW SE 26-2s-1e, dry at 2,307 ft., Menard 1,410 ft., Tar Springs 1,539 ft., Glen Dean 1,644 ft., Cypress sand 1,878 ft., Benoist 2,033-60 ft., Aux Vases 2,100 ft., Ste. Genevieve 2,185 ft., Fredonia 2,254 ft.

M. M. Rozan 1 J. Mydler, E½ SE NW SW 3-3s-1e, location abandoned.

M. M. Rozan 1 Kenetski, W½ NW NE SE 3-3s-1e, location abandoned.

Massac County: C. C. Marshall 1 E. Harper, NE NE NE 19-14s-4e, location abandoned.

Marion County: Texas 1 Kagy, S½ SW NE 7-2n-2e, dry at 2,240 ft., Menard 1,410 ft., Tar Springs 1,530 ft., Glen Dean 1,605 ft., Hardinsburg 1,625 ft., Golconda 1,677 ft., Barlow 1,747 ft., Cypress 1,762 ft., Cypress sand 1,775 ft., Benoist 1,954 ft., Renault 1,975 ft., Aux Vases 1,990 ft., Ste. Genevieve 2,065 ft., Rosiclare 2,085 ft., Fredonia 2,095 ft., McClosky 2,107 ft., St. Louis 2,238 ft.

Richland County: Texas 1 Shan, E½ SE NW 27-3n-9e, dry at 3,100 ft.

Noef et al 1 A. Nuding, NW SW NW 6-4n-14w, location abandoned.

Sinclair 1 T. Legan, NE SE SW 18-3n-14w, dry at 3,394 ft., West Franklin 857 ft., Menard 2,429 ft., Glen Dean 2,664 ft., Cypress sand 2,860 ft., Benoist 3,019 ft., Benoist sand 3,058 ft., Renault 3,094 ft., Aux Vases 3,098 ft., Ste. Genevieve 3,183 ft., St. Louis 3,374 ft.

Saline County: Compton et al 1 Hudgins, NE NE SE 22-7s-5e, dry at 3,295 ft., Kincaid 1,968 ft., Glen Dean 2,627 ft., Cypress sand 2,962 ft., Benoist 3,094 ft., Ste. Genevieve 3,283 ft.

Shelby County: J. P. Babcock 1 Williams, SW SE NW 7-10n-3e, dry at 1,794 ft., Glen Dean 1,455 ft., Barlow 1,567 ft., Cypress sand 1,607 ft., Paint Creek sand 1,687 ft., Benoist 1,723 ft., Aux Vases 1,757 ft.

Carter 1 Leach, SE SW SW 5-9n-4e, dry at 2,055 ft., Glen Dean 1,510 ft., Cypress sand 1,670 ft., Benoist 1,786 ft., Ste. Genevieve 1,865 ft., McClosky 1,977 ft.

White County: Neff et al 1 Union Central Life, NE NE SE 9-7s-10e, dry at 2,982 ft., Kincaid 1,707 ft., Degonia 1,892 ft., Clore 1,964 ft., Menard 2,030 ft., Vienna 2,169 ft., Tar Springs 2,199 ft., Glen Dean 2,306 ft., Golconda 2,199 ft., Barlow 2,513 ft., Weller 2,536 ft., Paint Creek 2,630 ft., Benoist 2,690 ft., Renault 2,738 ft., Ste. Genevieve 2,786 ft., St. Louis 2,982 ft.

FIELD COMPLETIONS

Clay County

Olson: J. P. Washburn 1 C. Bonner, N½ NW SW 12-2n-7e, dry at 3,085 ft., Glen Dean 2,585 ft., Ste. Genevieve 3,018 ft., McClosky 3,055 ft., perf. 3,056-61 ft., casing collapsed, junked hole.

Sailor Springs: C. Robinson 1 Eastin, NW SW NE 26-4n-7e, pumped 496 bbl., 15-qt. shot 2,318-24 ft., pay 2,312-25 ft., Tar Springs 2,309 ft., T.D. 2,325 ft.

Crawford County

Robinson: Niagara Oil 1 Frazier, NW NE SE 30-7n-13w, pumped 6 bbl., 80-qt. shot 927-53 ft., Robinson sand 948 ft., T.D. 953 ft.

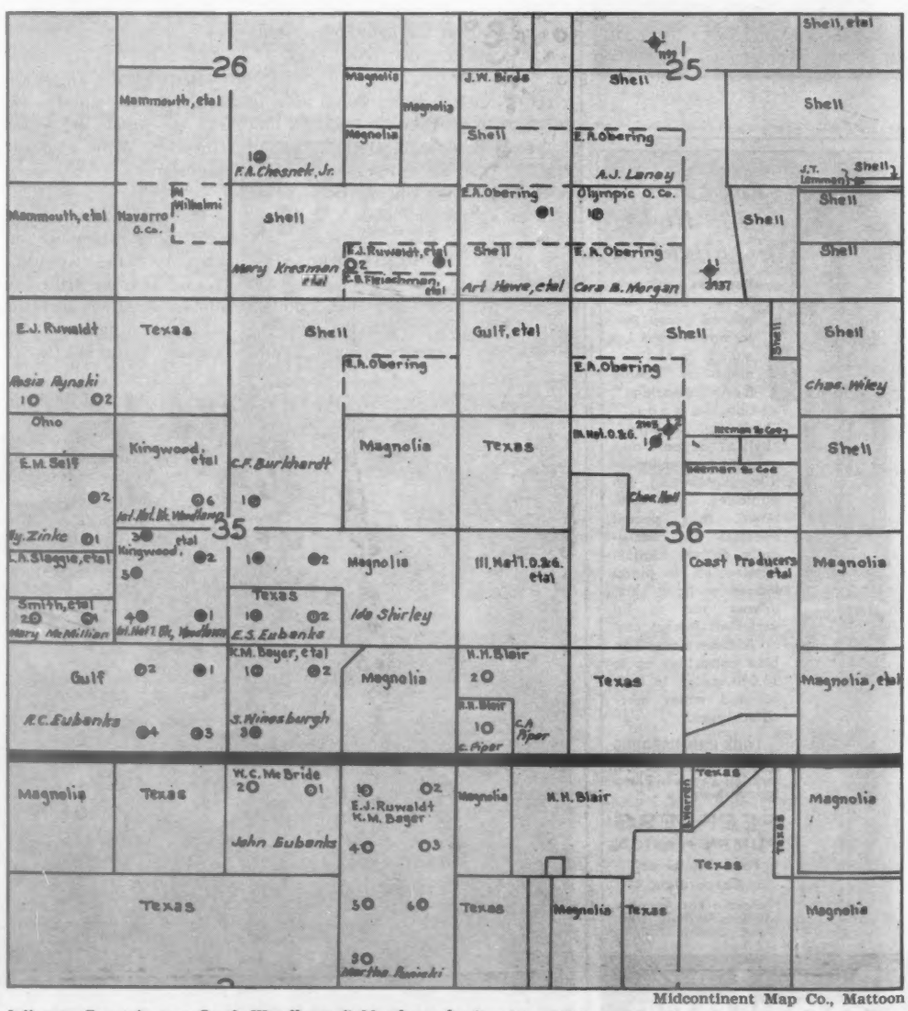
Edwards County

Bone Gap: Tide Water 2 Gawthrop, SW SW SW 7-1s-11e, flowed 313 bbl. through 1-in. choke, 1,000 gal. acid, perf. 3,251-56 ft., 3,254-57 ft., McClosky 3,228 ft., T.D. 3,277 ft.

Albion: Superior 4 C. L. Kiley, E½ NW SE SE 7-2s-11e, pumped 318 bbl., 3,000 gal. acid, perf. 3,167-80 ft., McClosky 3,067-80 ft., 3,138-48 ft., T.D. 3,180 ft.

Fayette County

Louden: Carter 3 Buzzard, NE SE SE 34-9n-3e, swabbed 72 bbl. oil and 20 bbl. water, 20-qt. shot 1,510-16 ft., Cypress sand 1,512 ft., T.D. 1,528 ft.



Midcontinent Map Co., Mattoon

Jefferson County's new South Woodlawn field where the Benoist sand is paying oil in large quantities is shown here. Wells completed in this field initial nearly 700 bbl. daily on an average. This is one of the many new fields whose rapid development is causing a steady increase in the state's activity and production

Jarvis Bros. 1-D Sinclair, SE NW NE 29-8n-3e, flowed 337 bbl. through ⅜-in. choke, 40 per cent water, 250 gal. acid, perf. 3,022-25 ft., Devonian 2,954 ft., pay 3,021 ft., T.D. 3,080 ft., P.B. 3,036 ft.
Carter 7-D Dunnaway, E½ NE NE 29-8n-3e, flowed 238 bbl. through ¼-in. choke, natural, Devonian 2,929 ft., T.D. 3,019 ft.
Carter 2 Purtilan School, SE SW NW 24-8n-3e, dry at 1,670 ft., Glen Dean 1,370 ft., Cypress 1,503 ft., Cypress sand 1,542 ft., Benoist 1,633 ft., Renault 1,668 ft.
Carter 3 O. Workman, SE NE NW 24-8n-3e, dry at 1,643 ft., P.B. 1,557 ft., Glen Dean 1,384 ft., Cypress 1,521 ft., Cypress sand 1,541 ft.
Carter 2 Buzzard, NW SW SW 35-9n-3e, swabbed 168 bbl. oil and 6 bbl. water, 40-qt. shot 1,507-20 ft., Cypress sand 1,504 ft., T.D. 1,520 ft.
Carter 1-4 Giles-Miller, NW NW SE NE 1-8n-3e, gas input well, perf. 1,499-1,507 ft., 1,481-93 ft., Glen Dean 1,322 ft., Cypress 1,457 ft., Cypress sand 1,484 ft., T.D. 1,528 ft.
Carter 36-5 E. E. Wood, NW NW NW SW 36-9n-3e, gas input well, perf. 1,539-44 ft., Glen Dean 1,370 ft., Cypress 1,501 ft., Cypress sand 1,532 ft., T.D. 1,548 ft.

Franklin County

Benton: Shell 13 C. W. & F. "R-S," NW SW NW 36-6s-2e, pumped 440 bbl., 30-qt. shot 2,134-64 ft., Tar Springs sand 2,098-2,101 ft. and 2,104-50 ft., T.D. 2,168 ft.
Wegener 1 C. W. & F. "M," SE SE SE 26-6s-2e, pumped 263 bbl., 30-qt. shot 2,136-49 ft., Tar Springs 2,120 ft., T.D. 2,150 ft.
Menhall 7 Moore, W½ NW NW SW 25-6s-2e, pumped 230 bbl., 30-qt. shot 2,152-67 ft., Tar Springs 2,131 ft., T.D. 2,167 ft.
Shell 3 T. N. McKennie, SE SE SE 24-6s-2e, pumped 182 bbl., 20-qt. shot 2,159-73 ft., Tar Springs 2,125 ft., pay 2,134-49 ft., 2,152-73 ft., T.D. 2,173 ft.
Gus Berry 1 Cummins, N½ N½ S½ NW 24-6s-2e, dry at 2,165 ft., Menard 2,002 ft., Waltersburg 2,046 ft., no Tar Springs sand.
Menhall 8 Stalkup, N½ NW NE SE 23-6s-2e, pumped 238 bbl., 20-qt. shot 2,096-2,112 ft., Tar Springs 2,091 ft., T.D. 2,117 ft.
J. H. Gilliam 1 Walker, SE SE SE 23-6s-2e, pumped 164 bbl., 21-qt. shot 2,112-27 ft., Tar Springs 2,089-99 ft., T.D. 2,129 ft.

Gallatin County

Wells: Sinclair 1 W. Henson, NW NE SW 2-8s-9e, pumped 85 bbl. oil and 85 bbl. water, 3,000 gal. acid, perf. 2,382-90 ft., 3,000 gal. reacid, McClosky 2,868 ft., T.D. 3,003 ft.

Hamilton County

Dale: Texas 2 R. R. Johnson, SW NW SE 7-6s-7e, pumped 152 bbl. from Benoist, 40-qt. shot 3,009-29 ft., reshot 80 qt. 3,009-29 ft., Benoist 2,880-86 ft., 2,891-2,902 ft., T.D. 3,029 ft.
Texas 1 R. R. Johnson, NW NW SE 7-6s-7e, flowed 163 bbl. through tubing, 20-qt. shot 2,993-3,007 ft., reshot 40 qt. 2,991-3,007 ft., 20-qt. shot 2,898-2,910 ft., Benoist 2,874-2,910 ft., Aux Vases 2,974 ft., T.D. 3,033 ft., P.B. 2,013 ft.
Shell 2 Dudley et al, SW NE SW 7-6s-7e, pumped 196 bbl., 10-qt. shot 3,010-20 ft., Benoist 2,899 ft., T.D. 3,034 ft.
Pure 2 Fairweather, NE NW SW 7-6s-7e, flowed 1,750 bbl., 260-qt. shot 3,012-40 ft., Aux Vases 2,994 ft., pay 3,000-15 ft., 3,023-36 ft., T.D. 3,048 ft.
Walpole: Texas 1 Irvin, S½ NW SW SE 27-6s-6e, flowed 548 bbl. through casing, 40-qt. shot 3,074-3,102 ft., Aux Vases 3,057 ft., T.D. 3,102 ft.
Dahlgren: Fields 1 Kennedy, W½ NE NW 27-3s-5e, pumped 220 bbl., 5,000 gal. acid, McClosky 3,303 ft., pay 3,299-3,306 ft., T.D. 3,314 ft.

Jasper County

Boos: Wiser Oil 1 M. Richards, S½ SE NW 4-5n-10e, pumped 48 bbl. oil and 2 bbl. water, 30-qt. shot 2,714-38 ft., Aux Vases 2,705 ft., T.D. 2,837 ft., P.B. 2,743 ft.
North Boos: Lain O. & G. 2 Henry "B," NW NW NW 9-6n-10e, dry at 2,855 ft., Glen Dean 2,262 ft., Cypress sand 2,422 ft., Benoist 2,605 ft., Aux Vases 2,670 ft., Ste. Genevieve 2,724 ft., McClosky 2,778 ft.

Jefferson County

South Woodlawn: Magnolia 1 Shirley, NW NW SE 35-2s-1e, pumped 710 bbl., 30-qt. shot 1,970-82 ft., Benoist sand 1,960 ft., T.D. 1,982 ft.
Kingwood 3 First National Bank of Woodlawn, NE NW NE SW 35-2s-1e, pumped 388 bbl., 20-qt. shot 1,961-70 ft., Benoist 1,948 ft., T.D. 1,973 ft.

Marion County

Fairman: Shell 2 C. A. Adams, SW SW SW SE 7-3n-1e, pumped 11 bbl., natural, Benoist 1,430 ft., pay 1,437-40 ft., T.D. 1,441 ft.
Patoka: Adams O. & G. 10 Pugh, SE NW NE 29-4n-1e, location abandoned.
Adams 23 Merryman, SE SW SW 21-4n-1e, pumped 18 bbl., 60-qt. shot 1,410-41 ft., Benoist 1,395 ft., T.D. 1,447 ft.

St. Clair County

Dupo: Hacker 1 Hall, NW SW NE 28-1n-10w, pumped 12 bbl. oil and 50 bbl. water, 20-qt. shot 491-521 ft., 280 gal. acid, Trenton 482 ft., T.D. 522 ft.

Wabash County

Mount Carmel: O'Meara 1 Coleman, SW SE SW NE 20-1s-12w, pumped 150 bbl., 20-qt. shot 2,028-42 ft., Cypress sand 2,028-43 ft., T.D. 2,043 ft.
Roberts & George 2 Smith, NE SE SW SE 20-1s-12w, pumped 200 bbl. oil and 200 bbl. water, 1,800 gal. acid, 1,000 gal. reacid, McClosky 2,388-2,400 ft., perf. 2,388-2,400 ft., T.D. 2,455 ft.
Olds 1 White, SE NW SW 21-1s-12w, pumped 141 bbl. oil and show water, 35-qt. shot 2,022-38 ft., Cypress sand 2,022-39 ft., T.D. 2,039 ft.
Yingling 2 Smith, SW NE NE SW 21-1s-12w, pumped 175 bbl., 40-qt. shot 1,980-89 ft., Cypress sand 1,980-89 ft., T.D. 1,989 ft.
Allendale: Adams Corner O. & G. 2 Wright, NE SE SW 9-1n-12w, dry at 2,025 ft., Cypress sand 1,990 ft., 60-qt. shot 1,995-2,010 ft., shot collapsed tubing, junked hole.

Washington County

Irvington: Ameriagene, Inc., 1 Erbes, SE NW SW 10-1s-1w, pumped 96 bbl., natural, Benoist 1,524 ft., T.D. 1,527 ft.
Ohio 3 Poggemoeller, NW SW SE 10-1s-1w, pumped 24 bbl., natural, Benoist sand 1,514 ft., T.D. 1,520 ft.
Cities Service 1 Poggemoeller, SW NW SE 10-1s-1w, dry at 1,534 ft., Glen Dean 1,197 ft., Benoist 1,519 ft.

Wayne County

Johnsonville: Wiser Oil 1 Watson, N½ SE NW 34-1n-6e, flowed 1,638 bbl., 5,000 gal. acid, perf. 3,000-03 ft., 3,036-42 ft., 3,049-53 ft., 3,056-61 ft., McClosky 3,036-42 ft., 3,049-53 ft., 3,056-61 ft., T.D. 3,086 ft.
Texas 1 Leathers, S½ NW SW 27-1n-6e, flowed 5,028 bbl., natural, McClosky 3,015 ft., pay 3,015-21 ft., 3,025-30 ft., T.D. 3,032 ft.
Texas 1 M. Watson, N½ NE NW 34-1n-6e, flowed 1,704 bbl., 2-in. tubing, natural, McClosky 3,017-25 ft., 3,031-38 ft., T.D. 3,044 ft.
Texas 2 M. Watson, S½ NE NW 34-1n-6e, flowed 1,037 bbl. through 2-in. tubing, pay 3,048-56 ft., T.D. 3,068 ft.
Clay City: Pure 4 C. Hosselton, W½ SW SE 21-2n-8e, pumped 171 bbl., 40-qt. shot 2,632-47 ft., Cypress sand 2,622-28 ft., T.D. 2,647 ft.
South Clay City: Freeman Oil 1 Beaird, N½ NE SW 22-2n-8e, dry at 3,130 ft., Glen Dean 2,455 ft., Cypress sand 2,645 ft., Ste. Genevieve 2,980 ft., McClosky 3,034 ft.
North Enterprise: Pure 3 Hosselton "B," NW SW NE 31-2n-8e, flowed 527 bbl., 5,000 gal. acid, McClosky 2,993-98 ft., T.D. 3,030 ft.
J. W. Sanders 1 Hosselton, NW NW SE SE 19-2n-8e, pumped 96 bbl., 5,000 gal. acid, perf. 2,974-78 ft., 2,987-93 ft., McClosky 3,025-28 ft., T.D. 3,036 ft.
Enterprise: Pure 2 Campbell "B," E½ NW NE 33-2n-8e, pumped 133 bbl., 5,000 gal. acid, McClosky 3,010-17 ft., 3,060-65 ft., 3,052-57 ft., T.D. 3,100 ft.

White County

West Irons: Sinclair 2 Johnson, NE NE SW 26-6s-8e, pumped 88 bbl., 3,000 gal. acid, perf. 2,795-2,805 ft., 3,000-10 ft., acidized 5,000 gal., McClosky 3,003-11 ft., pay 3,036-61 ft., T.D. 3,085 ft.
Rising Sun: Cherry & Kidd et al 1 Karch, SE SW SE 13-6s-10e, pumped 325 bbl., natural, Palestine 2,006-22 ft., T.D. 2,026 ft.
Cherry & Kidd 2-A Carter, NE SE NW 24-6s-10e, pumped 215 bbl., 20-qt. shot 2,005-19 ft., Palestine 2,004 ft., T.D. 2,026 ft.
Roland: Lewis Prod. 3 Mitchell, NW NE SW 11-7s-8e, flowed 450 bbl., 20-qt. shot 2,157-72 ft., old well worked over, T.D. 2,172 ft.
Arrow-Fisher 1-B Mitchell, SE SW NW 11-7s-8e, pumped 125 bbl., natural, Waltersburg 2,167½ ft., T.D. 2,175 ft., P.B. 2,168 ft.
Carter 1 Fuller, SE SE NW 11-7s-8e, swabbed 860 bbl., 20-qt. shot 2,170-76 ft., Waltersburg sand 2,164 ft., T.D. 2,181 ft.
Lewis Prod. 4 Mitchell, SW NE SW 11-7s-8e, pumped 66 bbl. oil and 38 bbl. water, 3-qt. shot 2,181-86 ft., Waltersburg 2,175 ft., T.D. 2,186 ft., P.B. 2,182½ ft.
Kingwood and Sinclair 2 Porter, NW SW SW 12-7s-8e, pumped 157 bbl. oil and 15 bbl. water, 20-qt. shot 2,725-45 ft., Benoist 2,729-45 ft., T.D. 2,750 ft., P.B. 2,745 ft.
Shell 4 McKenzie, NE NE SE 11-7s-8e, pumped 70 bbl. in 18 hr., 40-qt. shot 2,743-50 ft., perf. 2,172-76 ft., 20-qt. shot 2,745-50 ft., Benoist 2,124-37 ft., T.D. 2,750 ft.
Storms: Sinclair 12 Rudolph, SE SW SW 12-6s-9e, pumped 112 bbl., 12-qt. shot 2,268-76 ft., Waltersburg 2,264 ft., T.D. 2,277 ft.
East Calvin: W. W. Gray 1 fee-D, SE NW SW 21-4s-14w, pumped 20 bbl. oil and 25 bbl. water, 75-qt. shot 2,850-66 ft., Aux Vases 2,829-59 ft., T.D. 2,866 ft.
P. Miller 8-B Ford, SE NW NW 21-4s-14w, pumped 65 bbl., 25-qt. shot 2,854-65 ft., perf. 2,228-38 ft., Aux Vases sand 2,833 ft., Benoist 2,740 ft., T.D. 2,987 ft., P.B. 2,821 ft.
Sinclair 9 Donald, SW SW SE 21-4s-14w, swabbed 197 bbl., 1,500 gal. acid, 3,000 gal. reacid, McClosky 2,948-59 ft., pay 2,948-59 ft., T.D. 2,962 ft.
North New Harmony: Superior 12 Fitten, SW NE NW 28-4s-14w, pumped 210 bbl., 120-qt. shot 2,829-55 ft., 160-qt. shot 2,829-55 ft., perf. 2,585-2,602 ft., 2,695-2,728 ft., 100-qt. shot 2,826-55 ft., Aux Vases 2,826-52 ft., Benoist 2,695-2,720 ft., T.D. 2,855 ft.
Superior 17 Fitten, SW NE NE 28-4s-14w, pumped 350 bbl., 120-qt. shot 2,834-60 ft., perf. 2,584-2,604 ft., Aux Vases 2,826-57 ft., Cypress sand 2,586-2,638 ft., T.D. 2,860 ft.
Superior 18 Fitten, NW NW NE 28-4s-14w, pumped 359 bbl., 50 per cent water, 1,000 gal. acid, perf. 2,951-55 ft., McClosky 2,953-58 ft., T.D. 2,980 ft.
Tide Water 28 Dennis, NW SE NE NE 33-4s-14w, pumped 160 bbl., 60-qt. shot 2,704-35 ft., Benoist 2,687 ft., T.D. 2,735 ft.
Tide Water 29 Dennis, NW SE SW NE 33-4s-14w, pumped 199 bbl., 60-qt. shot 2,705-35 ft., Renault 2,701-12 ft., sand 2,717-35 ft., T.D. 2,735 ft.
Superior 11 Ford "D," NW SW NW NW 34-4s-14w, pumped 185 bbl., 160-qt. shot 2,565-2,600 ft., Cypress sand 2,554-2,600 ft., T.D. 2,600 ft.

ILLINOIS DRILLING REPORT

Hamilton County: Kingwood et al 1 Johnson, NE SE NE 14-6s-5e, T.D. 3,198 ft., swabbed 421 bbl., testing.
Jefferson County: Prelm Enterprises, Inc. 1 Pleszeholskix, NW SW SW 4-3s-1e, first report, rig.
Nation 1 C. A. Piper, NE NW NW 1-3s-1e, first report, rig.
Lawrence County: Stockes & Kieffer 1 Rogers, NW SE SW 17-2n-12w, Glen Dean 1,800 ft., drilling 2,045 ft.
Midwest Dev. 1 Mullens, NW NW SE 15-2n-12w, Bridgeport 1,112 ft., sand 1,432 ft., 8-in. 1,472 ft., drilling 1,512 ft.
Marion County: Swan-King 1 Kotva heirs, S½ SW NW 36-4n-2e, T.D. 3,692 ft., P.B. 2,113 ft., 5½-in. 2,082 ft., waiting on cement.
Shelby County: Oils, Inc. 1 Barkhurst, SW SW NE 7-10n-3e, T.D. 1,727 ft., sand 1,701-07 ft., show oil 1,707-27 ft., water, to P.B.
Wabash County: Kennedy 1 Karch, S½ S½ SW 16-1s-12w, Glen Dean 1,763 ft., Golconda 1,850 ft., Barlow 1,955 ft., Cypress sand 1,979-88 ft., T.D. 2,000 ft., swabbed 100 bbl., pumped 8 bbl. an hr., testing.
Joe Young 1-A Price, E½ NW NE SW 14-1n-12w, drilled out to 1,639 ft., pulling 8-in.
Joe Young 1-A D. H. Price, NW NW NW 1-1n-12w, T.D. 1,990 ft., 7-in. 1,970 ft., pumped 13½ bbl. oil and show water in 13 hr., testing.
White County: Yingling et al 1 Shepard, NE NE NE 5-4s-10e, first report, material on ground.
Wall & Mitchell 1 Thacher heirs, NW NW SE 22-3s-10e, first report, 10-in. 78 ft., drilling 1,125 ft.

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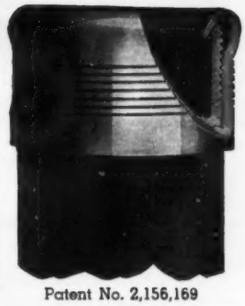

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High-Gravity Tensleep Oil Sought in Wertz Dome Area

By T. R. INGRAM

DENVER, Colo., Aug. 11.—Drilling in the Rocky Mountain area is showing an upward trend with 11 new operations last week, of which all but one were in producing fields. Several important wildcats are already under way and indications point to a number of others at an early date.

A test which is attracting considerable attention is the Bison Basin Oil Co. 1 Kirk, NW SW 17-27n-95w, in Bison Basin, 30 miles west and 5 miles north of the Lost Soldier field. Running eastward from Lost Soldier are a series of structures, including Wertz, Mahoney dome, East Mahoney and Ferris, where the Sinclair-Wyoming Oil Co. has an extensive drilling campaign under way. In these fields large wells are being completed in the Tensleep of Pennsylvanian age, the crude running from around 32 up to as high as 58 gravity. The Bison Basin test is headed for this prolific horizon and hoping to find the same type of crude as against the heavy black oils in the Lander district to the northwest.

Bison Basin, formerly called Buffalo Basin, has been tested with 7 or 8 wells, most of them finding gas in the Frontier sands. The Tensleep has never been drilled in the area. Fuel for the test is obtained from a well in the same section completed in 1930 at 1,320 ft. for 4,000,000 cu. ft. No. 1 Kirk had a good sand in the Frontier at approximately 986-1,013 ft. showing some saturation. Above this it had gone through two gas sands. At 1,028-42 ft. it cored a heavily saturated sand which looked as though it would make a commercial oil well, but it was not tested. It had the upper Sundance at 2,578-2,661 ft., which had a small show of oil. The test is on a unitized block of 1,300 acres, mostly government land.

Sinclair-Wyoming is starting four more wells in Carbon and Sweetwater counties, three of which are outside wells in the Wertz field, and the fourth an important test to the Tensleep on East Ferris, due east of Mahoney dome. Nine small shale wells at shallow depth drilled several years ago are shut in, and there is one gas well. The new test is a northwest offset to a well drilled in 1928 which had water in a sand at 4,598-4,600 ft., and plugged back to 4,335 ft. and was completed for 125 bbl., initial production.

Sinclair is now shipping considerable oil from this district to the Sinclair refineries in the east through the Stanolind trunk line to Missouri. The capacity of this line is now being enlarged from 30,000 to 45,000 bbl. daily through the construction of 62 miles of 10-in. pipe in four loops between Washington, Kans., and Feeman, Mo., to take care of increasing shipments from Wyoming and western Kansas.

Garetson-Knisely Co. have moved a slim rotary into the La Barge district and is reported to have contracted four wells to date for the Marvel Oil Co.

Good Well Completed Without Acid in Kevin-Sunburst

Imperial-Craig 5 Martin, SW SW 18-35n-1w, in a district in Kevin-Sunburst which was condemned before acidization came into use, was completed for 135 bbl. natural first 24 hours. It may be acidized later. Wells making 15 to 25 bbl. after acidizing have been the rule in this district.

J. H. Agen 17 Goeddert, SE NW 23-35n-3w, which had only 100 ft. of oil in the contact, was converted into a 75-bbl. pumper through acidization.

Montana production in June, as reported by the state oil Conservation Board, was 617,026 bbl., an increase over May of 5,215 bbl. Storage was 1,297,822 bbl., increase of 52,340 bbl.

Rangely Drilling Campaign Starts; New Test in Northeastern Colorado

United Oil Production Co., of which Burton E. Coles is president, has spudded in its 1 Hill, in the Rangely field, in Colorado, the first of a series of 15 wells to be drilled to the shallow sands.

SUMMARY OF COMPLETIONS

Colorado

	No.	Bbl.	Footage
Oil wells: Fields	1	200	6,487

Wyoming

	No.	Bbl.	Footage
Oil wells: Fields	4	1,786	15,657
Gas wells: Fields	1	*30	5,482
Total	5	.....	21,139

Montana

	No.	Bbl.	Footage
Oil wells: Fields	3	212	4,731
Gas wells: Fields	1	*2	1,280
Total	4	.....	6,011

*Million cu. ft.

Mutual Oil Co. 1 State, C SW SW 32-7n-51w, has spudded with heavy rotary equipment on the first wildcat to be drilled east of the South Platte River in Logan County, northeastern Colorado. It is on a block of 6,000 acres, mostly state land. Pulse Drilling Co. has the contract. Location was made on the basis of magnetic, seismograph and surface geology.

Northwest New Mexico Field to Have Pipe-Line Outlet

Petroleum Products Pipe Line Co. is making surveys for a projected 30-mile line from the Hospah field, McKinley County, northwest New Mexico, to Prewitt, on the Atchison, Topeka & Santa Fe Railroad. It is a subsidiary of the Petroleum Products Corp., which has a refinery at Prewitt and has been trucking crude from its leases in the Hospah field.

COLORADO COMPLETIONS

Wilson Creek, Rio Blanco County: Texas-California 6 Unit, NW NE SE 27-3n-94w, T.D. 6,487 ft., in Sundance sand, plugged back and completed in Morrison sand at 6,280-97 ft. for 200 bbl. a day natural through ½-in. bean.

COLORADO DRILLING REPORT

El Paso County: F. F. Hintze 1 State, CEL SE SE 16-11s-66w, S.D. 1,990 ft.

La Plata County: N. Spatter 1-X Bruce, C SW SW 31-33n-9w, S.D. 4,450 ft.

E. B. Klem 1 Olbert, NW SW 9-35n-12w, drilling 4,213 ft.

Logan County: Mutual Oil 1 State, C SW SW 32-7n-51w, spudded.

Moffat County: Mountain Fuel Supply 9 Wilson, NE SE NE 22-12n-100w, rigging rotary to go to 2,500 ft.

Privett & Spangler 1 Stillings, NE SE SE 12-5n-96w, drilling 650 ft. in gray shale.

Mountain Fuel Supply 2 Lasher, NW NE NE 25-12n-101w, ready to spud.

Mountain Fuel Supply 4 Musser, NE NW NW 4-11n-97w, drilling 2,392 ft.

Rio Blanco County: Buford Oil 1 Government, C SW SW 16-1n-91w, drilling 4,527 ft., anhydrite and dolomite.

Texas-California 7 Unit, NE SW SE 34-3n-9w, drilling 2,810 ft., 13⅜-in. at 405 ft.

United Oil Prod. 1 Hill, Lot 13, 6-1n-101w, spudded.

WYOMING COMPLETIONS

Byron field, Big Horn County: Ohio Oil 2-A Haskins, SE SE SE 15-56n-97w, T.D. 5,360 ft., pumped 420 bbl. first 24 hr. from Tensleep, 7-in. at 5,230 ft.

Lance Creek, Niobrara County: Continental 8-A Dielman, NW NW NW 8-35n-65w, T.D. 5,325 ft., 7-in. at 5,295 ft., flowed 790 bbl. first 24 hr. from Lee sand.

Muskrat field, Fremont County: Sinclair-Wyoming 3-A Ute, NW NW NE 3-33n-92w, T.D. 5,482 ft., water in Lakota, P.B. to 5,317 ft., and completed for 30,000,000 cu. ft. in Frontier through perf. with 51 holes at 4,130-55 ft.

Oregon Basin field, Park County: Husky Refining 2 Morris, SW NE 29-51n-100w, T.D. 3,540 ft., 8⅝-in. at 3,510 ft., pumped 480 bbl. from Ember.

Osage field, Weston County: F. P. Dilcer No. 17, 4 NW SW 30-46n-63w, sand at 1,408-32 ft., shot with 50 qt., swabbed 86 bbl. first 24 hr.

WYOMING DRILLING REPORT

Carbon County: Sinclair-Wyoming 5-C Mahoney, C NW SE 34-26n-88w, T.D. 4,566 ft., P.B. to 4,413 ft., redrilled to 4,491 ft., shot with 310 qt. at 4,325-4,410 ft., testing.

Sinclair-Wyoming 22-A Wertz, CEL SE SE 1-26n-90w, drilling 6,171 ft. in Tensleep.

Sinclair-Wyoming 23-A Wertz, NE NE NE 12-26n-90w, drilling 6,171 ft. in Tensleep.

Glen Swartout 3 Union Pacific, NE NE SE 21-22n-78w, drilling 240 ft., top Wall Creek 140 ft.

Ohio 3 H. & C., C SW SE 27-20n-78w, T.D. 3,717 ft., P.B. to 3,702 ft., making 60 bbl. oil and 47 bbl. water.

Ohio 4 Harrison & Cooper, NW SE 27-20n-78w, drilling 275 ft., first report, Rock River field.

Sinclair-Wyoming 26 Wertz, NW SE SE 1-26n-90w, cellar. First report, Wertz field, across line in Sweetwater County.

Sinclair-Wyoming 25 Wertz, NW SE SW 6-26n-89w, derrick, first report.

Sinclair-Wyoming 24 Wertz, NW NW SW 7-26n-89w, cellar, first report.

Sinclair-Wyoming 25-C, SE SE NW 25-26n-87w, building rig, first report, Tensleep test, East Ferris field.

Fremont County: Indian Oil 3 Tribal, NW SW NW 23-6n-2w, drilling 693 ft.

Valentine M. Kirk 3 Tribal, NW NW SW 23-6n-2w, drilling 1,089 ft.

Bison Basin Oil 1 Kirk, CEL NW SW 17-27-95w, coring 2,664 ft. in Sundance.

Lincoln County: Department Oil Synd. 1 Government, NW cor. Lot 2, 3-26n-113w, drilling 960 ft., first report, La Barge field.

Natrona County: General Pet. 37-21-G, NW SE NW 21-35n-77w, drilling 4,425 ft.

General Petroleum 55-22 Government, NW SE 22-35n-77w, derrick, waiting on rotary.

Casper Creek Oil 1 State, SW SW NW 36-36n-81w, T.D. 2,612 ft., preparing to run 6¼-in.

Iba Development 1, C NE SE 25-32n-82w, drilling 1,540 ft., carrying 5¼-in.

Stanolind 25 SD-3, SE SE SW 26-40n-79w, drilling 2,675 ft., old well deepening from Lakota to the Sundance.

Niobrara County: Ohio 10 A. Rohlff, SW NE 32-36n-65w, drilling 5,308 ft.

Ohio 19 Lamb, CSL, NW NE 5-35n-65w, T.D. 5,460 ft., 7-in. at 5,359 ft. on top third Leo.

Arco 17-B Elliott, SW NE NE 6-35n-65w, T.D. 5,462 ft., P.B. to 5,396 ft., perf. 7-in. at 5,144-5,242 ft., testing.

Western Petroleum 1 Mosier, SW SW 31-35n-64w, drilling 760 ft.

Continental 9-A Schuricht, NW NW SW 5-35n-65w, derrick, waiting on equipment.

Continental 14 O. Rohlff, NW NW SW 32-36n-65w, drilling 2,757 ft. in shale.

Lewis Gokel 2, CEL SW SE 2-34n-63w, spudded.

Park County: Stanolind 21-X Rosenberg, NE SW NW 25-58n-98w, T.D. 3,037 ft., testing.

Ensinac O. & G. 1 Purple-O.P.C., SE SE 31-51n-100w, drilling 3,815 ft.

Standard 11-X Rosenberg, SE NE NE 26-58n-98w, drilling 2,218 ft.

MacKinney Oil & Drilling 1 Northern Pacific, CNL NW NW 5-57n-99w, drilling 1,693 ft.

Ensinac Oil & Gas 3 Sarah, C SW SE 32-51n-100w, moving in, first report, Oregon Basin field.

Sublette County: Texas 1-A Government, NW NW NW 34-27n-113w, drilling 910 ft.

North La Barge Oil 9 Government, CSL, NE NE 28-27n-113w, T.D. 1,286 ft., P.B. to 1,135 ft., testing.

Marvel Oil 2 Govt., C NE SE 28-27n-113w, rigging rotary.

Garetson-Knisely 2 Government, CEL NW SE 28-27n-113w, drilling 1,400 ft., first report.

Sweetwater County: Rocky Mountain Drilling 1 State, SW SW SW 36-20n-104w, S.D. 6,447 ft.

West States Pet. 1 Unit, C SE SE 10-12n-101w, drilling 3,410 ft., 5,000,000 cu. ft. gas in sand at 2,715-35 ft.

Gus Pongratz 1 Clark, C NW NE 22-14n-104w, drilling 6,109 ft., top Embar 5,840 ft., last report, not releasing depth.

Sinclair-Wyoming 101-A, NW NW NW 11-26n-90w, drilling 3,896 ft.

Mountain Fuel Supply 2 Newberger, SW NW NW 18-12n-99w, T.D. 3,845 ft., P.B. to 3,285 ft., testing through perf. casing at 3,220-50 ft.

Sinclair-Wyoming 102 Lost Soldier, SE SE SE 3-26n-90w, derrick.

Vermillion Oil 1 Government, SW NE NE 6-12n-99w, drilling 1,360 ft.

Weston County: W. H. Connor 2 State, NE SW 36-42n-62w, drilling 823 ft., show oil in upper Sundance at 815-23 ft.

John Brorphy 1 Hansen, NW NE NW 13-44n-63w, T.D. 2,820 ft., fishing.

Pierre LaFleiche 1 Dober, NW NW NE 21-45n-63w, coring in Muddy sand, top 3,570 ft.

Carl Kundv No. 3, NE NE NW 32-46n-63w, location.

George Keisling 2 Guver, SW SW SE 26-46n-64w, sand at 1,916-53 ft., will make av. well.

Bert Higgins 8 fee, NE NW SW 4-46n-63w, drilling below 100 ft.

Wyoming Oil & Gas No. 18, CEL SE SW 19-46n-63w, drilling 500 ft.

MONTANA COMPLETIONS

Kevin-Sunburst field, Toole County: J. H. Agen 17 Goeddertz, SE SE NW 23-35n-3w, T.D. 1,702 ft., contact 1,694-1,702 ft., 100 ft. oil, acid, 500 gal., pumped 75 bbl. first 24 hr.

Dakota-Montana Oil 20-A Government, NE SW SW 31-35n-1w, T.D. 1,398 ft., contact 1,397-98 ft., pumped 2 bbl. a day natural, acid, 1,000 gal., testing.

Imperial-Craig 5 Martin, C SW SW 18-35n-1w, T.D. 1,633 ft., contact 1,615-33 ft., pumped 135 bbl. natural first 24 hr.

Montana-Dakota Utilities 321 Schmidt, C SE SE 20-35n-1w, T.D. 1,280 ft., Sunburst at 1,113-33 ft., 2,000,000 cu. ft. of gas.

MONTANA DRILLING REPORT

Carbon County: Continental 1 Merrill, SW SW SW 34-9s-25e, spudded.

Fallon County: Carter 1 Northern Pacific unit, C SE SW 19-4n-62e, drilling 7,809 ft., dolomite and lime.

Garfield County: California Co. 4 Charles, C SE NW 21-15n-30e, drilling 5,700 ft.

Glacier County: Par Oil 1 Tribal-200, NE NE SE 13-32n-6w, T.D. 705 ft., fishing.

Texas 7 Curren, C SE NW 8-32n-5w, location.

(Continued on Page 100)

LOUISIANA GULF COAST

Deep Sand Production Found On North Flank of Gueydan

By F. L. SINGLETON

NEW ORLEANS, La., Aug. 11.—Evidence of a new discovery in Plaquemines Parish, the opening of deep sand production on the north flank of the Gueydan field, Vermilion Parish, and the revival of wildcatting in the Grandison area, La Fourche Parish, highlighted developments in the Louisiana Gulf Coast district the past week.

Phillips 1 L. L. & E., a wildcat located in the Bastian Bay area, Plaquemines Parish, showed promise of production when it flowed at the rate of 15 bbl. of oil per hour on a 4-hour drill-stem test through perforated casing at approximately 9,349-52 ft. However, at the end of the test, working pressure had dropped from 1,350 lb. to 500 lb., and the well started to flow 80 per cent salt water. At the end of the week, the perforations were being cemented off, and another test was expected to be made in the same section. Total depth of th hole is 10,710 ft., and 9⅝-in. casing was cemented at 10,073 ft. The well is located in 38-20s-29e, and it is the third test to be drilled in the area by the company.

Deep sand production which was opened the past year on the south flank of the Gueydan field, Vermilion Parish, was opened on the north flank of the structure by Fohs Oil Co. 1 Grady Lee Humble. While no gage was available the well is flowing 34.8-gravity oil through a 12/64-in. choke while testing through perforated casing at 7,565-80 ft. Tubing pressure was 1,150 lb. Total depth of the hole is 8,260 ft., with 7-in. casing cemented at 8,020 ft. Development of this structure was revived last year by new sand discoveries on the south flank from which several wells are now producing at intervals from 8,700 to 10,000 ft.

Wildcat development on the Grandison prospect, southeast La Fourche Parish and southwest Jefferson Parish, is being resumed as Texas Co. announced locations for two wells. They are 1-A and 1-B La Fourche Basin Levee District in 32-19s-24e, just across the line in Jefferson Parish. The locations are about 3 miles southwest of two deep tests drilled the past year by the Gulf Refining Co., both of which were drilled below 12,000 ft.

Lakeside Gas-Distillate Production Extended Northeast

Gas-distillate production in the new Lakeside field, Cameron Parish, was extended about 3,200 ft. northeast by the completion of Superior Oil Co. of California 1 Calcasieu National Bank in 18-12-4w. Drilled to a total depth of 10,422 ft., production was obtained by perforating casing opposite sand at 9,900-15 ft., and on a 24-hour gage through an 18/64-in. choke, the well flowed 43 bbl. of 53-gravity distillate and 2,463,000 cu. ft. gas. Tubing pressure was 1,475 lb. This is the second completion for the structure and production is from sand slightly higher than the discovery well, completed at 10,050-60 ft.

Pine Prairie Dome Limits Defined on Northwest

Production from the 8,200-8,300-ft. sand recently established on the east flank of the Pine Prairie dome, Evangeline Parish, was apparently defined to the northwest as Pan American 1 Guillory is shut down for orders at 8,412 ft. after finding only 4 ft. of sand with an oil show in a core at 8,366-8,406 ft. The balance of the sand section carried salt water. The well is northwest of Gulf 2-A Evangeline which found the sand low but was completed for a producer in sand at 8,320-30 ft. Whether the Pan American test will be carried deeper in search of additional sands was not announced. Abandonment of the well would mark the first failure and would shift interest to the south and southwest.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Fields	13	3,075	97,468
Dry holes: Fields	2		13,373
Total	15		110,841

Test Staked in St. Helena Parish

Along the Wilcox trend, and located in St. Helena Parish, northwest of the town of Greenburg, Humble Oil & Refining Co. is moving in material for 1 Great Southern Lumber Co. in 20-1s-5e. This is the first wildcat activity to be reported for this parish in several years and in view of the limited amount of exploration in the area, the progress of the well will be watched with much interest.

Big Well Completed At Fausse Point

Important production is believed to have been opened on the flank of the Fausse Point dome, Iberia Parish, as Texas 9 State flowed at the rate of 280 bbl. daily while testing through various chokes. Total depth of the hole is 8,800 ft., and production is from perforated casing opposite sand at 8,700 ft. While this is not the first production to be found on the structure, the strike is considered important in view of the fact that production heretofore has been short lived and at a recent date only three wells were on production having a daily average production of 36 bbl.

LOUISIANA GULF COAST COMPLETIONS

Barataria, Jefferson Parish: California Co. 15-C Fleming Plantation, 284 bbl., 5/32-in. choke, perf. casing 7,626-50 ft., T.D. 7,656 ft.

Bayou Blue, Iberville Parish: Superior 14 Schwing Lumber & Shingle Co., 100 bbl., ⅛-in. choke, perf. casing 4,150-60 ft., T.D. 4,864 ft.

Chalkley, Cameron Parish: Shell 11 Hanzen, 369 bbl., 12 hr., 7/64-in. choke, T.D. 10,115 ft.

Delta Farms, La Fourche Parish: Texas 1 State-Delta Farms, 470 bbl., 7/32-in. choke, T.D. 10,433 ft.

Golden Meadow, La Fourche Parish: Brown Wood Oil Co. 3 Lefort, 287 bbl., 10/64-in. choke, perf. casing 5,416-40 ft, T.D. 5,510 ft.

Texas 10 La Terre, dry, T.D. 10,560 ft.

Texas 13 State, dry, T.D. 2,813 ft.

Jeanerette, St. Mary Parish: Herton 3 Banta-Roane, 266 bbl., ⅛-in. choke, T.D. 10,367 ft., P.B. T.D. 9,418 ft.

Jennings, Acadia Parish: George Michael 2 Clement, 15 bbl. oil plus 5 per cent salt water, pumping, T.D. 3,553 ft., P.B. T.D. 1,629 ft.

Lafitte, Jefferson Parish: Lafitte Oil Corp. 1 Jefferson Parish, 300 bbl., 7/32-in. choke, perf. casing 9,988-10,012 ft., T.D. 10,161 ft.

New Iberia, Iberia Parish: William Helis 3 Bolivar, 260 bbl., ¼-in. choke, perf. casing 3,594-3,600 ft., T.D. 3,922 ft.

Lisbon-Iberia 12 Gulf fee, 142 bbl., plus 4 per cent salt water, pumping, T.D. 6,066 ft., P.B. 5,852 ft.

Texas 21 J. P. Duhe, 219 bbl., ¼-in. choke, T.D.

(Continued on next page)

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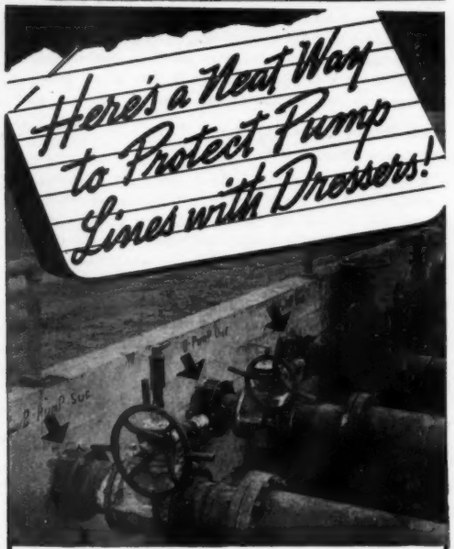

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Southwest Tinsley Outpost Cores Saturated Oil Sand

By GEORGE WEBER

JACKSON, Miss., Aug. 11.—The lease and royalty play southwest of production in the Tinsley field heightened last week, with the showing of oil in W. G. Ray Drilling Co. 1 Walker, southwest outpost test. The 1 Walker recovered porous saturated oil sand in the last 7 ft. of a core taken at 5,028-42 ft.

Two drill-stem tests of the section were attempted but in both cases the seat failed to hold. Operators were running an electrical log over the week end, and a production test is expected shortly. The ¾-mile southwest outpost has the Woodruff sand approximately 23 ft. above what is considered to be the water level in the zone, in that section of the field.

North Tinsley Interest Centers On Eutaw Discovery

Interest in the north end of the field centered on Union Producing Co. 2 Powell, which has encountered a new oil horizon in the basal Eutaw at 5,761-86 ft. The test was drilled ahead last week to 6,140 ft. and an electrical survey was run. The oil sand lies between the Stevens group and the Powell sand of the Tuscaloosa formation, producing in the 1 Powell to the south of the current edge test. The section corresponding to the Powell in 2 Powell showed salt water.

Slick-Urschel Oil Co. abandoned 1 McGraw, 1¼ mile north of production in the field, at 6,528 ft. with no shows reported in the Selma, Eutaw or Tuscaloosa formations. This test apparently limits the extension of production northward from the Union Production Co.'s Powell lease, to a little over a mile, in the horizons now producing in the field.

Tinsley Production Climbs

Production in the field passed the 10,000,000-bbl. mark last week, as withdrawals continued at the high average of 47,243 bbl. daily. Tank-car shipments of crude are moving to five points in Illinois, four in Louisiana, two in Mississippi and Kentucky and one in Tennessee, with further prospective refiners studying the crude for possible future purchases. Since the field is served by no pipe-line outlet, and is dependent entirely on rail facilities for long-distance movement, it appears vulnerable to future possible shortage in tank cars.

Some decrease in production is anticipated. At a meeting of operators, held last week, following a state Oil and Gas Board hearing, operators agreed to limit production to 500 bbl. per well per day. While this limit would still allow a production of over 100,000 bbl. daily, most wells are being operated at considerably less than that schedule. The sizable increases in production during the past few weeks have been due in part to increases in particular leases, on one of which a well was pumped at the rate of 1,500 bbl. daily. No state control of production exists, and the operators, in assuming the voluntary production limit, expect to forestall such action. At the state hearing no testimony either for or against proration was submitted and consequently no action was taken.

Exploration

Sun Oil Co. staked 1 J. G. Ainsworth, the long-awaited wildcat in Copiah County. The company has engaged in extensive geophysical and core drilling activity in Copiah and neighboring counties, and the wildcat, its first in the current play, is well regarded. It may be carried to 10,000 ft.

MISSISSIPPI COMPLETIONS

Wildcat, Yazoo County: Slick-Urschel Oil Co. 1 F. A. McGraw, SW NW 25-11-3w, T.D. 6,528 ft., dry.

Tinsley, Yazoo County: Amerada Petroleum Corp. 4 Tom Stutts, NE NW 36-10-3, 768 bbl., 1-in. choke, T.P. 40 lb., T.D. 4,714 ft., 5½-in. casing 4,711 ft., perf. 4,638-60 ft., Woodruff zone.

J. P. Evans 1 Tom Stutts, NW NE SW 31-10-2, pumped 792 bbl., T.D. 5,051 ft., 7-in. casing 5,051 ft., perf. 4,932-5,016 ft., Woodruff zone.

Hassie Hunt 1 Jerry Woodruff, NW SW 11-10-3, pumped 474 bbl., T.D. 4,740 ft., 7-in. casing 4,698 ft., perf. 4,536-58 ft., Woodruff zone.

Hassie Hunt 3 Jerry Woodruff, NW NW 11-10-3, T.D. 4,903 ft., dry.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Tinsley	3	2,034	14,505
Dry holes: Tinsley	1	.....	4,903
Wildcats	1	.....	6,258
Total	5	.....	25,666

MISSISSIPPI WILDCATS

Chickasaw County: Century Oil Co. 1-A Flaherty, S½ SW SW 8-13s-3e, fishing 2,000 ft.

Grenada County: Grenada County Drlg. & Dev. Co. 1 Connecticut General, S.D. 3,743 ft.

H. T. Salter et al 1 Carpenter, NE SE 6-21-7e, rigging up.

Kemper County: D. C. Williams et al 1 McKelvain, SE NE 2-9n-17e, T.D. 1,704 ft., washing down.

Lawrence County: Tide Water Associated Oil Co. 1 Denman Lumber Co., N½ SW 5-5n-11e, moving in material.

Leake County: Sinclair-Wyoming Oil Co. 1 Pearl River, NW SE NW, drilling 8,216 ft.

Marshall County: W. B. Fly 1 Tucker, NE NE 20-5s-4w, spudded.

Sharkey County: British American Oil Prod. Co. 1-A Houston, NW NE SW 23-11-7w, T.D. 4,355 ft., P.B. 3,285 ft., acidized and perf. 3,278-80 ft., reacidized, preparing to test with pump.

Stone County: H. I. Morgan 1 University of Mississippi, SE 35-3s-10w, spudding.

Yazoo County: Fred Endom 1 State School Land, NE NE NE 16-9n-3w, set surf. casing, W.O.C.

E. C. Johnston 1 J. M. Gaddis, C E½ 26-10n-1w, drilling 4,165 ft.

West Central Texas Fields

(Continued from Page 71)

Ungren & Frazier 1 Dyer "A," 1,400 ft. from E and 1,518 ft. from S lines Sec. 86, Blk. 18, T.&P. Sur., dry at 1,325 ft.

Taylor County: McQueen & Clevenger 1 Drummond, Sec. 1, T.&N.O. Sur., dry at 2,435 ft.

Fields

Brownwood Gas. Brown County: Hightower Oil 1 Hall, dry at 1,773 ft.

Buff Creek, Shackelford County: Hickok & Reynolds 3 Swenson, 71 bbl. in 24 hr., 1,512-16 ft.

Hamby, Shackelford County: E. H. R. Sabens 2 Shotwell, 60 bbl. in 24 hr., plus 10 per cent water, 1,546-60 ft., P.B. from 1,563 ft.

Loving, Stephens County: Wittmer Oil & Gas 1-A McKelvin, 96 bbl. in 6 hr., est. 250 bbl. daily, top Caddo lime 3,493 ft., 3,000 gal. acid, 3,493-3,549 ft.

Strawn, Palo Pinto County: Palo Pinto Oil & Gas 27 Strawn Coal, dry at 3,325 ft.

Miscellaneous Pools

Shackelford County: R. H. Roark 7 Elliott, 6 bbl. in 24 hr., pumping, 821-29 ft.

WEST CENTRAL TEXAS ACTIVE WILDCATS

Brown County: H. P. Evans 1 Starkley, SE SE Sec. 3, H. C. Walker Sur., 1,200-ft. test, drilling 849 ft.

Callahan County: J. D. Kynaston 1 Seale, 868 ft. from S and 1,859 ft. from W lines J. H. Brown Sur. 254, 1,000-ft. cable-tool test, drilling 420 ft.

Coleman County: States Oil 1 Frank Hudson "B," 467 ft. from S and 1,401 ft. from W lines N½ Sec. 22, Blk. 2, T.&N.O. Sur., 3,500-ft. rotary test, drilled oil sand 3,323-25 ft., cored to 3,343 ft., setting casing.

Comanche County: L. H. Choate 1 Pearl Kirk, 467 ft. from S and E lines P. D. Crump Sur. A-1905, 5,000-ft. cable-tool test, drilling 305 ft.

Guyle Grenolds 1 Shoults, 200 ft. from N and 450 ft. from W lines Lot 30, Lampasas C.S.L. Sur. 34, 750-ft. cable-tool test, first report.

Concho County: C. M. Joiner Leasing Corp. 1 Armor, 1,315 ft. from S and 330 ft. from W lines Sec. 105, Blk. 72, T.&N.O. Sur., old well drilling deeper, old T.D. 1,565 ft., S.D. 2,540 ft.

Eastland County: Bryan & Stewart 1 Hall, 330 ft. from N and E lines SE Sec. 46, Blk. 2, H.T.&B. Sur., cleaning out after 200-qt. shot at 2,710-63 ft.

Dodds Oil 1 L. A. Hightower, NE SE Sec. 4, Blk. 3, H.&T.C. Sur., P.B. to 3,041 ft., 200-qt. shot 2,974-3,041 ft., cleaning out, T.D. 3,310 ft.

Fisher County: P. R. Long 1 Maberry, SE cor. A. A. Soring Sur., S.D. 3,289 ft., orders.

Minerals Research 1 C. C. Prather, 660 ft from S and 467 ft. from E lines Sec. 53, Blk. 1, H.T.&B. Sur., coring 3,294 ft.

Stephenson 1 Humphries, NW NW Sec. 49, Blk. 1, H.T.&B. Sur., preparing to deepen, T.D. 3,035 ft.

Haskell County: J. W. Crites 1 Hendricks, 600 ft. from N and 2,636 ft. from E lines J. Fenner Sur. A-582, 1,750-ft. cable-tool test, first report.

Jones County: Butler & Horne Drlg. Co. 1 Wimberly, 330 ft. from S and W lines 200-acre farm in Guadalupe Martinez Sur., drilling 993 ft.

Danciger Oil & Ref. 1 Reeves, 330 ft. from W and 1,600 ft. from S lines 460½-acre farm in E½ Maria Rita Longoria Sur. 258, drilling 2,100 ft.

Mils County: Three Widows Oil 1 Burdett, 467 ft. from N and E lines Lot 59, Hayes C.S.L. Sur., drilling 2,740 ft.

Palo Pinto County: Hickok & Reynolds 3 Gauldin, 467 ft. from S and E lines Sec. 1756, T.E.&L. Sur., 4,250-ft. test, first report.

Parker County: J. L. Higginbotham 1 Wheeler, SE cor. J. B. Brannon Sur. A-1928, shot 80-qt. at 4,711-56 ft., no results, attempted 100-qt. shot at 4,280-4,300 ft., fishing tools.

Shackelford County: F. A. Aikin 1 Shotwell, 1,520 ft. from E and 1,020 ft. from S lines Sec. 55, Blk. 14, T.&P. Sur., drilling 780 ft.

Aragon Oil 1 Walls Pasture, SW cor. Sec. 39, B.A.L. Sur., waiting on cement 3,577 ft.

R. H. Roark 1 Elliott "A," SW SW SE Sec. 9, L.A.L. Sur., S.I. 2,889 ft.

R. H. Roark 1 Elliott "B," 660 ft. from S and E lines SW¼ Sec. 9, L.A.L. Sur., 5,000-ft. cable-tool test, first report.

Ungren & Frazier 2 Dyer "A," 2,033 ft. from E and 935 ft. from S lines Sec. 86, Blk. 12, T.&P. Sur., 1,350-ft. cable-tool test, first report.

Ungren & Frazier 3 Dyer "A," 1,595 ft. from E and 935 ft. from S lines Sec. 86, Blk. 12, T.&P. Sur., 1,350-ft. cable-tool test, first report.

J. B. Young 2 Elliott, 450 ft. from N and 1,650 ft. from E lines Sec. 45, B.O.A. Sur., 750-ft. cable-tool test, first report.

Somervell County: Plymouth Oil 1 Cousins, 456 ft. from SE and NE lines of tract in John Echols Sur., drilling 4,277 ft.

Stephens County: T. S. Schroeder 1 Corbett, 2,200 ft. from E and 444 ft. from N lines Sec. 12, Blk. 3, S.P. Sur., drilling 2,195 ft.

Stonewall County: Shell 1-A Patterson, 1,650 ft. from N and 990 ft. from W lines Sec. 357, Blk. D, H.& T.C. Sur., drilling 2,657 ft.

Taylor County: Ce-Beth Oil 1 City of Abilene, south shore of Lake Abilene of city property, cleaning out 4,100 ft.

Lewis Prod. 1 Huddleston, 330 ft. from N and W lines Lot 6, Grimes C.S.L. Sur. 124, location.

NORTH TEXAS ACTIVE WILDCATS

Archer County: Deep Oil Dev. Co. 1 Carter, Sec. 38, Blk. 5, Clark & Plumb Sur., first report.

Ted Norwood 1 Wright, 150 ft. from N and W lines Sec. 2435, T.E.&L. Sur., 1,500-ft. test, S.D. 1,455 ft., orders.

Clay County: Bridwell Oil 1 Myers, old well drilling deeper, Charleton Thompson Sur. A-444, old T.D. 6,065 ft., waiting on spudder to deepen.

L. T. Burns 1 Hodges, 330 ft. from S and 1,320 ft. from W lines Sec. 64, J. H. Belcher Sur., 6,000-ft. rotary test, pits.

Norwood & Waggoner 1 Huff, 1,937 ft. from E and 2,957 ft. from S lines J. Bradshaw Sur. A-17, 1,200-ft. rotary test, first report.

Cooke County: Burk Royalty Co. 1 Ware, 330 ft. E of A. C. C. Bailey Sur. A-44, and 330 ft. N of H. P. Ware tract, 2,300-ft. test, drilling 2,205 ft.

Dickson Oil and R. B. George 1 George, 330 ft. from NE NW E 40 acres, R. B. George farm, James Bradshaw Sur. A-29, drilling 5,087 ft.

Denton County: Jones Drlg. and D. S. Hager 1 Waide, 467 ft. from S and E lines W 160-acre tract in J. Pearson Sur. A-1050, first report.

Jack County: Alma Oil 1 Maxey, V. W. Maxey Sur., testing on pump, 5,392 ft.

F. Kirk Johnson 1 E. J. Shawver, 660 ft. from S and 520 ft. from E lines NW SE J. Turner Sur. A-609, 5,500-ft. test, drilling 3,606 ft.

Magnolia 1 Borden, 1,000 ft. from N and 500 ft. from W lines W. R. Smith Sur. A-547, Ellenburger test, derrick, moving in materials.

Ben Rankin and Elliott Prod. 1 Stewart, 738 ft. from S and 660 ft. from E lines Sec. 2799, T.E.&L. Sur., 4,400-ft. test, drilling 2,730 ft.

Montague County: Benson Bros. 1 J. J. Lowery, 1,878 ft. from W and 1,506 ft. from S lines Sec. 72, A. Beason Sur. A-20, 6,200-ft. rotary test, drilling 5,015 ft.

J. A. Chapman 1 Fowler, 330 ft. from S and E lines J. W. Massie Sur. A-463, first report.

Wilbarger County: F. H. E. Oil and Fleming & Kimbell 1 Allison, 467 ft. from S and W lines Allison 90-acre tract out of NW cor. Sec. 54, Blk. 12, H.&T.C. Sur., 6,500-ft. rotary test, drilling 3,120 ft.

Young County: L. T. Burns 1 Jeffery, 1,400 ft. from N and E lines Sec. 47, T.E.&L. Sur., 5,500-ft. rotary test, pits.

Consolidated Oil 1 Dunigan, 467 ft. from S and E lines Sec. 163, T.E.&L. Sur., 5,000-ft. test, acidized with 500 gal., no results, will retest.

R. P. Dorian 1 Daniels, 330 ft. from S and W lines Sec. 421, T.E.&L. Sur., 6,000-ft. test, perf. casing 4,413-35 ft., filled 1,000 ft. oil in hole in 1 hr., preparing to reperf.

F. H. E. Co. and Fleming-Kimbell Corp. 1 Graham, SE cor. Sec. 2912, T.E.&L. Sur., 5,000-ft. test, treated with 5,000 gal. acid, perf. casing 4,680-90 ft., swabbing.

Louisiana Gulf Coast

(Continued from Preceding Page)

6,236 ft., P.B. T.D. 5,952 ft.

Quarantine Bay, Plaquemines Parish: Gulf 25 State, 276 bbl., 9/64-in. choke, T.D. 9,501 ft., P.B. T.D. 8,225 ft.

Ville Platte, Evangeline Parish: Continental 2 Fontenot, 87 bbl. distillate, ¼-in. choke, T.D. 9,084 ft.

LOUISIANA GULF COAST DRILLING REPORT

Allen Parish: W. T. Burton 1 Calcasieu National Bank, 21-5s-3w, drilling shale 9,771 ft.

Frank Campbell 1 Bowles, 14-3s-6w, drilling shale 5,969 ft.

Calcasieu Parish: Pan American 1 Louisiana Farm & Livestock, 8-11s-9w, drilling shale 10,411 ft.

Iberia Parish: Texas 2 State-Rabbit Island, Twp. 18s-8e, drilling shale 7,584 ft.

Iberville Parish: Congo Oil Co. 1 Theodore Dreyfus, 61-7s-9e, drilling shale and sand 9,375 ft.

La Fourche Parish: Gulf 7 State-PP, 8-21s-21e, drilling shale 9,286 ft.

Orleans Parish: W. T. Burton 7 State, 18-11s-15e, drilling shale 6,612 ft.

Terrebonne Parish: Gulf 1 Picou, 70-20s-18e, S of Houma, drilling shale 11,815 ft.

CANADIAN FIELDS

Castor Area Near Calgary May Be Tested Again

By VICTOR LAURISTON

CHATHAM, Ont., Aug. 11. — Standard Oil Co. of British Columbia is carrying on geological investigations and structure testing in the district surrounding the town of Castor in Central Alberta, northeast of Calgary. In 1914 a municipal well in 26-37-14w4 got gas at 1,430 ft., suficient to supply a few local consumers. A deep test by Hudson's Bay Oil & Gas Co. on the Paintearth structure, in 27-39-14w4, was carried to 4,675 ft., getting several oil shows. The area is in Townships 37 to 40, Ranges 13 and 14w4.

Crude Production Steady; Thirty-Seven Operations Active

Crude and natural-gasoline production from all Alberta fields for the week ending July 28 averaged 27,699 bbl. daily compared with 27,751 bbl. daily for the previous week and 27,848 bbl. daily for the corresponding week of 1940. The daily average included 26,761 bbl. of crude and 639 bbl. natural gasoline from Turner Valley, 47 bbl. from the Steveville-Princess field, and 252 bbl. from other fields. There were 181 producing wells compared with 134 a year ago. For all Alberta fields there were 28 wells drilling, 1 spudding, 1 resuming, 7 testing, and 3 drilling licenses issued for new wells.

The aggregate daily allowable production for Turner Valley crude wells has been set by the Alberta Conservation Board at 26,000 bbl. The largest producers are: Home Oil 2, 789 bbl.; Alberta Oil Incomes 2, 660 bbl.; Home Oil 7, 659 bbl.; Lion-Sunray, 618 bbl.; Home Oil 1, 560 bbl.; Foothills Oil & Gas 5, 516 bbl. All these except the Lion-Sunray well are in North Turner Valley. Among the major groups, Royalite Oil Co., and associates, with 45 wells, were allotted 8,421 bbl. daily; Home Oil, with 8 wells, 3,290 bbl.; Anglo-Canadian Oil Co., with 24 wells, 2,934 bbl.; and the Brown-Moyer-Brown group, with 15 wells, 1,523 bbl. daily; Oil Ventures group, 11 wells, 1,611 bbl.

The total August production, set at 806,000 bbl., comprises a conservation allotment of 511,500 bbl. and a special war emergency allotment of 288,796 bbl.

Turner Valley Lime Tests

North Turner Valley: Miracle Royalties 1, LSD 3, 4-21-3w5, finished at 8,010 ft., Madison 7,524 ft., acidizing and testing 125 ft. of porosity in the upper and 65 ft. in the lower lime; large producer indicated.

Major Oil Investments 1, LSD 5, 34-20-3w5, T.D. 7,593 ft., Madison 6,406 ft., 283 bbl. daily allowable.

Home Oil 7, LSD 14, 33-20-3w5, T.D. 8,630 ft., Madison 8,088 ft., 659 bbl. allowable.

Home Oil 8, LSD 16, 15-20-3w5, T.D. 8,441 ft., Madison 7,884 ft., 92 bbl. allowable.

Royalite Oil 47, LSD 15, 15-20-3w5, T.D. 8,826 ft., Madison 8,365 ft., 430 bbl. allowable.

Royalite 56, LSD 12, 14-20-3w5, T.D. 7,912 ft., Madison 7,425 ft., temporary allowable 127 bbl. daily.

North Central field: Empress Royalties 1, LSD 5, 2-20-3w5, testing upper lime at 8,787 ft., Madison 8,675 ft.

West Central field: Atlas Royalties 1, LSD 1, 24-19-3w5, T.D. 8,070 ft., Madison 7,588 ft., 177 bbl. allowable.

British American-Brown 2, LSD 2, 24-19-3w5, T.D. 8,395 ft., Madison 7,936 ft., 272 bbl. allowable.

Twin Valley Syndicate 2, LSD 10, 13-19-3w5, T.D. 8,470 ft., Madison 7,987 ft., 348 bbl. allowable.

British American-Brown 1, LSD 14, 13-19-3w5, T.D. 8,634 ft., Madison 8,178 ft., temporary allowable 235 bbl.

Anglo-Canadian Oil 9, LSD 14, 7-19-2w5, T.D. 7,589 ft., Madison 7,130 ft., 380 bbl. allowable.

Royalite Oil 55, LSD 7, 7-19-2w5, T.D. 7,643 ft., Madison 7,179 ft., 223 bbl. allowable.

Outside Fields

Willow Creek: Oilfields Development 1, LSD 7, 7-13-2w5, preparing to resume from 1,570 ft.

Pincher Creek: Weymarn Petroleums 3, LSD 5, 24-6-2w5, working on cellar.

Blood Indian Reserve: Northwest Treaty 1, LSD 4, 18-7-23w4, T.D. 6,037 ft.; Madison, 5,980 ft., with casing cemented 6,032 ft. swabbing test.

Keho Lake: Keho Dome Oil 1, LSD 3, 18-11-22w4, spudded and below 200 ft.

Lethbridge: Lethbridge Petroleum 1, LSD 12, 11-8-22w4, T.D. 4,152 ft., Madison 4,145 ft., installing pumping equipment and storage, estimated 25 to 50 bbl. daily.

Crude-Oil Prices

Representative crude prices from selected fields in various parts of the country and details of flat-price postings in Texas, Kentucky, Montana, Colorado and Canada appear below. Full particulars on other crude postings appeared on Pages 82 and 83 in the issue of August 7.

East Texas	$1.25
Conroe	1.43
Tepetate, Louisiana	1.18
Smackover, Arkansas, heavy	.83
Illinois basin	1.37
Pecos County, Texas	.95
Lance Creek, Wyoming	1.12
Bradford, Pennsylvania	2.75

Gravity Schedules

Top prices include all gravities above grades designated, and low prices include all gravities below grades designated:

Gravity	Signal Hill Calif.	Okla. homa, Kansas	Gulf Coast, Texas	West Texas, Lea County, N. M.
18-18.9	$0.80	...	...	...
19-19.9	.84	...	$1.06	$0.70
20-20.9	.88	$0.85	1.08	.72
21-21.9	.92	.87	1.10	.74
22-22.9	.96	.89	1.12	.76
23-23.9	1.00	.91	1.14	.78
24-24.9	1.03	.93	1.16	.80
25-25.9	1.07	.95	1.18	.82
26-26.9	1.11	.97	1.20	.84
27-27.9	1.15	.99	1.22	.86
28-28.9	1.18	1.01	1.24	.88
29-29.9	1.20	1.03	1.26	.90
30-30.9	1.23	1.05	1.28	.92
31-31.9	...	1.07	1.30	.94
32-32.9	...	1.09	1.32	.96
33-33.9	...	1.11	1.34	.98
34-34.9	...	1.13	1.36	1.00
35-35.9	...	1.15	1.38	1.02
36-36.9	...	1.17	1.40	1.04
37-37.9	...	1.19	1.42	1.06
38-38.9	...	1.21	1.44	1.08
39-39.9	...	1.23	1.46	1.10
40 and above	...	1.25	1.48	1.12

TEXAS FLAT-PRICE FIELDS

Agua Dulce, Benavides, Longhorn, Southland and Sweden $1.35
Republic Oil Refining Co., 5-21-41.

Alfred and Magnolia City $1.35
Continental Oil Co., 5-21-41.

Alice, Benavides (North Sweden), Ben Bolt, Clark-Muil, Sun, and Tom Graham $1.35
Humble Oil & Refining Co., 5-21-41.

Batson (new), Humble (35° and above), Fig Ridge, Hardin, Hull (25° and above), La Belle, North Dayton (25° and above), Seabreeze South China, West Orange, Willow Slough and Oyster Bayou $1.25
Sun Oil Co., 5-21-41.

Cass County $1.20
Texas Co., 5-21-41.

Cayuga, Anderson County $0.90
Pan American Production Co., 5-21-41.

Clay Creek, Washington County $1.00
Sun Oil Co., 5-21-41.

Cleveland, Liberty County $1.26
Magnolia Petroleum Co., 5-21-41.

Conroe, Montgomery County $1.43
Humble Oil & Refining Co., 5-21-41.
Tide Water Associated Oil Co., 5-21-41.
Sun Oil Co., 5-21-41.
Texas Co., 5-21-41.

Cotton Lake (South) $1.35
Sun Oil Co., 5-21-41:

East Texas and Flag Lake* $1.25
**Humble Oil & Refining Co.*, 5-21-41.
Pan American Production Co., 5-21-41.
Tide Water Associated Oil Co., 5-21-41.
Gulf Refining Co., 5-21-41.
Magnolia Petroleum Co., 5-21-41.
Sinclair Prairie Oil Marketing, 5-21-41.
Shell Oil Co., Inc., 5-20-41.
Sun Oil Co., 5-21-41.
Texas Co., 5-21-41.
Stanolind Oil Purchasing Co.

Esperson (35° and above), South Esperson $1.30
Sun Oil Co., 5-21-41.

Flour Bluff, East Flour Bluff $1.33
Humble Oil & Refining Co., 5-21-41.

Hockley and Cochran $0.87
Texas Co., 5-21-41.

Livingston $1.25
Shell Oil Co., Inc., 5-20-41.

Long Lake $1.23
Sinclair Prairie Oil Marketing, 5-21-41.

Luby $1.35
Amsco Pipe Line Co., 5-21-41.

Luling $1.05
Magnolia Petroleum Co., 5-21-41.

Lytton Springs $1.17
Magnolia Petroleum Co., 5-21-41.

Salt Flat, North Salt Flat, Darst Creek*, Hilbig, Clark, Carroll, and Zoborski $1.14
Humble Oil & Refining Co., 5-21-41.
Magnolia Petroleum Co., 5-21-41.
**Texas Co.*, 5-21-41.

Rincon (North) $1.35
Sun Oil Co., 5-21-41.

Sun $1.35
Sun Oil Co., 5-21-41.

Talco $0.79
Humble Oil & Refining Co., 5-21-41.
Magnolia Petroleum Co., 5-21-41.

Tomball and Satsuma $1.40
Humble Oil & Refining Co., 5-21-41.
**Magnolia Petroleum Co.*, 5-21-41.

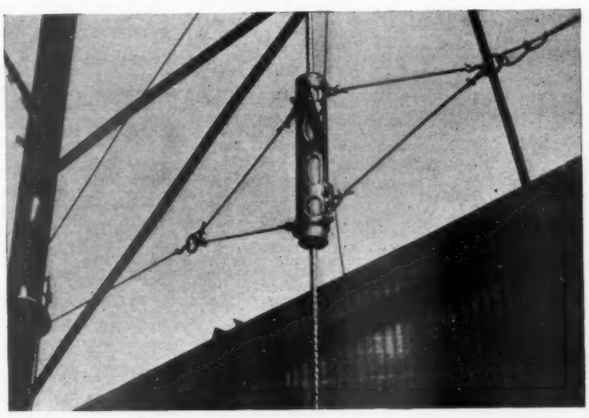
(Continued on Page 111)

LEGAL

July 28, 1941.

Call for bids. To purchase royalty oil accruing to the United States from the Lance Creek oil field, Wyoming. Sealed proposals, in duplicate, will be received in the office of the Secretary of the Interior, Washington, D. C., on or before noon August 20, 1941, from responsible bidders for the purchase for a term of one, three, or five years, beginning April 1, 1944, of certain royalty oil accruing to the United States from Federal lands in the Lance Creek oil field, Wyoming. Specifications containing detailed information on quantities offered for sale, form of bids, bond requirements, deliveries, volume measurements, minimum acceptable price, gravity determinations, and action on bids, should be obtained by prospective bidders from the Director, Geological Survey, Department of the Interior, Washington, D. C., or the Supervisor, Geological Survey, Casper, Wyoming. Sealed bids are to be submitted to the Secretary, Department of the Interior, Washington, D. C., pursuant to the specifications, the envelope to be marked plainly "Bid on Lance Creek royalty oil. Not to be opened before noon, August 20, 1941." No bid received after the time fixed herein for submitting bids will be considered. Oscar L. Chapman, Assistant Secretary of the Interior.

Wire line conservation requires this protective Guide



Tightening of government priorities may cause wire line shortage. You can positively lengthen wire line life by use of Patterson-Ballagh Wire Line Guides. They reduce fatigue, corrosion, kinking, strand separation and surface wear. They guide the line over the spool in soldier-like formation; eliminate the "traveling wave" and permit greater speed. Wire line protection demands this helpful, economical aid. See Composite Catalog.

PATTERSON-BALLAGH WIRE LINE GUIDES

Patterson-Ballagh Corporation

Los Angeles Houston New York City

New MAC PLUNGER BARREL

for 2-inch tubing

Gypsum cannot form in this barrel.

Outlasts three ordinary barrels, as Steel Plunger works in and out of Cast Iron Barrel as much as 2 feet on the up and down stroke and more if desired, thus flushing itself free of sand or gypsum.

Reversible Valve Body and Plunger make for lowest upkeep.

Furnished with 2-Cup Standing Valve and with, or without, Garbutt Rod.

Save, with the New "MAC"! Ask for complete details and price list.

McGREGOR

WORKING BARREL COMPANY

Bradford, Pa., U.S.A.

Three Gas Wells Completed In Ravenswood District

By STAFF CORRESPONDENT

PITTSBURGH, Pa., Aug. 11.—All sections of the lower eastern fields continue very active with the highlight of the week supplied in three commercial gas wells completed in the Ravenswood district, Jackson County, West Virginia, in the Oriskany sand which enhances the possibilities in the vicinity of Odaville.

On Chestnut Ridge in North Union Township, Fayette County, Pennsylvania, New Penn Development Co.-William E. Snee et al bottomed 1 Piedmont Coal Co., above the watering trough north of U. S. Route 40, at 7,347 ft. or 303 ft. below the top of the Oriskany sand. No additional gas was reported. Wasson & Co. et al are still deepening 2 J. H. Sorg and have reached 7,404 ft.

In South Union Township, Peoples Natural Gas Co. topped the Tully lime at 6,000 ft. in 5 Piedmont Coal Co. and are drilling at 6,012 ft. In the 4 Piedmont Coal Co. this company is drilling at 6,267 ft. with no Tully lime so far showing. Here, New Penn Development Co.-William Snee et al are drilling 1 Kirby at 2,501 ft. and 1 Carothers at 3,460 ft. Greensboro Gas Co. is drilling 1 Barton at 3,148 ft.

On Laurel Ridge in Stewart Township, Fayette County, New Penn Development Co. et al have reached 8,411 ft. or 107 ft. below the top of the Oriskany sand in the wildcat on the Gregg L. Neel farm and have no gas showing.

In Beaver County, St. Joseph Lead Co. is hung up in the wildcat on the J. P. Koehler farm in Center Township with five strings of tools in the hole at about 5,000 ft. Gas pockets in the shales have caused serious blowouts so that in drilling by a set of lost tools to loosen them, another blowout occurs.

In Armstrong County, T. W. Phillips Gas & Oil Co. et al are drilling at 3,875 ft. in the deep test on the W. T. Biedenbach farm on the Kellersburg anticline in West Franklin Township.

SUMMARY OF COMPLETIONS

Southwest Pennsylvania

	No.	Bbl.	Footage
Gas wells	6	*.45	15,049
Dry holes	1		1,401
Total	7		16,450

West Virginia

	No.	Bbl.	Footage
Oil wells	1	2	2,616
Gas wells	12	*2.6	35,971
Dry holes	5		5,437
Total	18		44,024

Oriskany

	No.	Bbl.	Footage
Gas wells	3	*6.2	15,693

*Million cu. ft.

Armstrong County

Manor Township: Local Co. 1 R. H. Iseman, 19,000 cu. ft. gas, Bradford sand, T.D. 3,500 ft.

Clarion County

Monroe Township: Owens-Illinois Glass Co. 1 Scott Barnhart, 39,000 cu. ft. gas, Speechley sand, T.D. 2,740 ft.

Fayette County

Menallen Township: Victor Piccollomini 1 Paul Zekel, dry, through Injun sand, T.D. 1,401 ft.

Nicholson Township: Boyd Oil & Gas Co. 1 Morris, 47,000 cu. ft. gas, Big Injun sand 1,345-50 ft., through Fifth sand to 2,503 ft.

Washington County

Fallowfield Township: Equitable Gas Co. 1 Nancy Warren, 250,000 cu. ft. gas, Salt sand gas 1,340 ft., T.D. 1,344 ft.

North Strabane Township: Carnegie Nat. Gas Co. 1 Devore, 50,000 cu. ft. gas, Gantz sand 2,286-2,306 ft., gas 2,280-83 ft., first gage 520,000 cu. ft., T.D. 2,735 ft.

Somerset Township: Equitable Gas Co. 1 Albert Jones, 40,000 cu. ft. gas, Gantz sand 2,224-37 ft., gas 2,227 ft., T.D. 2,893 ft.

WEST VIRGINIA

In Monongalia County, the deep test of the Hope Natural Gas Co. on the H. C. Greer et al lease in Morgantown district is still held up with a fishing job at 6,650 ft. In Lewis County, their rotary test on the Alfred Woofter farm in Freemans Creek district reached 4,685 ft. and now is drilling around the drill pipe at 2,250 ft. in a fishing job.

Braxton County

Birch district: Pittsburgh & W. Va. 7836 Ed L. Boggs, 70,000 cu. ft. gas, Injun sand, T.D. 2,018 ft.

Salt Lick district: George Jackson 1 M. J. Bosley, dry, through Injun sand.

Clay County

Buffalo district: Pittsburgh & W. Va. 7816 Elk River Coal Co., 50,000 cu. ft. gas, Injun sand, T.D. 1,966 ft.

Doddridge County

West Union district: Braden & Creighton 1 Flora E. Martin, 2 bbl. and 40,000 cu. ft. gas, Pittsburgh Coal 512 ft., Gordon 2,579-81 ft., oil and gas 2,580 ft., T.D. 2,616 ft.

Gilmer County

Center district: Hunt & Adams 1 C. O. Kennedy, 29,000 cu. ft. gas, Big Injun sand 1,995-2,091 ft., gas 1,995 ft., T.D. 2,131 ft.

Lincoln County

Union district: United 2289 George T. Holton, drilled deeper, started 2,233 ft., brown shale 2,845-95 ft., slate 3,496-3,501 ft., 36,500 cu. ft. gas, shot 2,851-3,490 ft., T.D. 3,501 ft.

Logan County

Logan district: Boone County Coal 20 fee, 298,000 cu. ft. gas, Big lime 2,420-2,610 ft., Big Injun 2,610-50 ft., Berea 3,104-27 ft., gas 3,110 ft., T.D. 3,-127 ft.

Preston County

Valley district: M. E. Davis et al 1 George Cobun et al, dry, 1,500 ft., casing pulled and plugged.

Putnam County

Curry district: Monickle Gas 1 Stewart Lake, 103,000 cu. ft. gas, Big lime 1,420-1,575 ft., Injun 1,636-85 ft., Berea 2,129-59 ft., brown shale 3,258-3,715 ft., Corniferous lime 4,070 ft., T.D.

Harry Harmon 1 Roncie Yoder, 848,000 cu. ft. gas, Salt sand 1,168-1,497 ft., Big lime 1,620 ft., gas 1,740 ft., T.D. 1,785 ft.

Teays Vellet district: Teavee Oil 1 Walter Foster, 368,000 cu. ft. gas, Big lime 1,430-1,560 ft., Big Injun 1,560-1,680 ft., Berea 2,128-46 ft., no shot, T.D. 2,160 ft.

Ritchie County

Grant district: William Collins 1 Jessie Stephens, 45,000 cu. ft. gas, Injun sand, T.D. 2,175 ft.

Murphy district: Clem S. Morris 2 C. W. Rexroad heirs, dry and abandoned, Squaw sand, T.D. 2,-442 ft.

Taylor County

Booths Creek district: Pittsburgh & W. Va. 6120 W. G. Beckner, dry, 935 ft., Big Injun sand 840-927 ft.

Upshur County

Buckhannan district: Pittsburgh & W. Va. 7775 Hugh Marple, 350,000 cu. ft. gas, Benson sand 4,690-4,707 ft., gas 4,693-96 ft., T.D. 4,716 ft.

Meade district: Cumberland & Allegheny 308 D. H. Harris, 225,000 cu. ft. gas, Gordon sand 2,192-2,204 ft., gas 2,192-97 ft., T.D. 2,405 ft.

Wayne County

Stonewall district: Owens, Libby-Owens 8 Guyan Oil Co., 179,000 cu. ft. gas, Big lime 1,313-1,493 ft., Big Injun 1,493-1,582 ft., brown shale 2,201-49 ft., 2,593-3,023 ft., gas in Injun and brown shale, shot 2,594-3,022 ft., T.D. 3,301 ft.

Wirt County

Clay district: Grant Fowler 1 Gerald Lockhart, dry. Big Injun sand, T.D. 460 ft.

ORISKANY GAS FIELDS

Kanawha County

Poca district: Godfrey L. Cabot 1 Edna V. Bailey, 2,834,000 cu. ft. gas, Corniferous lime 4,812 ft., Oriskany sand 4,906-79 ft., gas 4,906-12 ft., gas 4,921-26 ft., T.D. 4,979 ft.

Columbian 1 D. F. Fields, 2,778,000 cu. ft. gas, Corniferous lime 5,206 ft., Oriskany sand 5,325-69 ft., lime break 5,369-79 ft., shot 300 lb. gelatin 5,345-85 ft., T.D. 5,409 ft.

Brawley-Reid 1 Rittie Lance, gaging 582,000 cu. ft. gas while fishing tools lost in Oriskany sand, Corniferous lime 5,152 ft., Oriskany 5,275 ft., T.D. 5,305 ft.

Jackson County

In Ravenswood district, three wildcats appear to be commercial wells. About 1¼ miles south of Odaville, Columbian Carbon Co. completed the test on the J. H. Boggess et al lease with a gage of 4,500,000 cu. ft. gas 10 minutes after shot. The Corniferous lime was topped at 5,132 ft., Oriskany sand 5,263 ft., shot with 600 lb. gelatin 5,264-5,329 ft. The gage before shot was 260,000 cu. ft. but this has frozen back from a higher natural gage.

About 1½ miles north of Odaville, Joe Rubin et al completed the test on the W. B. Smith farm with a final gage of 1,495 cu. ft. gas after shot. Here, the Big lime was placed at 1,700-70 ft., Injun 1,820-1,905 ft., Berea 2,310-12 ft., Corniferous lime 4,772 ft., Oriskany 4,884-4,925 ft. with gas 4,900-05 ft. The rock pressure at the end of 40 hours was 1,800 lb. About 2 miles northeast of Odaville, this operator completed the test on the G. H. Ott heirs with a final gage of 852,000 cu. ft. gas after two shots. The Big lime was at 1,723-1,802 ft., Berea 2,325-36 ft., Corniferous lime 4,863-4,988 ft., Oriskany 4,988-5,027 ft., gas 4,988 ft. and 5,017 ft., T.D. 5,027 ft. It was shot 4,988-5,010 ft. and then at 5,017-27 ft.

These recent completions increase the possibilities of the field which as yet has not been directly connected with the Elk-Poca field in Kanawha County. Other tests, some distinctly wildcats, are drilling and they cover the intervening area between the Odaville and Sandyville districts as well as the Ripley area.

Drilling

Ripley district: Godfrey L. Cabot, Inc. 5 Putnam Co., top Corniferous lime 5,144 ft., casing set 5,129 ft.

McIntosh & Grimm 1 Austin Raines et al, top Corniferous lime 4,998 ft.

United Carbon Co. 8 Elizabeth W. Perkins, top Oriskany 5,072 ft.

United Fuel Gas Co. 5021 J. A. Shinn, top Corniferous lime 4,793 ft., Oriskany 4,903 ft., drilling.

Rocky Mountain Area

(Continued from Page 96)

Texas 2 Lander, C NE SE 20-35n-6w, straightening hole at 440 ft.

Texas 2-B Government, SE SE SE 18-32n-5w, spudded.

Glacier Production 5 Fuller, CEL NE 17-35n-5w, drilling 1,550 ft.

W. F. Saunders, trustee, 1 Tribal-199, NE SE SE 24-32n-6w, drilling 1,980 ft., top Colorado 635 ft., 10¾-in. 642 ft.

A. R. Pardue 3 Tribal-186, SW NW NW 20-32n-5w, drilling 500 ft., top Colorado 310 ft., 10¾-in. 35- ft.

Texas 3 Lindquist, C NE NE 20-32n-5w, spudded.

McDonald, Henderson, Overcash 2 Tribal-190, SW NW NW 29-32n-5w, rigging.

Texas 3 Willis, SE NW NE 19-32n-5w, spudded.

Ralph N. Davis 1 Tribal-205, NE SE NE 25-32n-6w, drilling 750 ft., top Colorado 640 ft., 10¾-in. 667 ft.

Hannah-Porter 3 Tribal-189, SW SE SE 19-32n-5w, cmtd. 7-in. 2,832 ft., Cut Bank sand at 2,829-66 ft., 900 ft. oil in hole.

Hanlon 1 Tribal-196, NE NE NE 30-32n-5w, location, first report.

M. R. Wagner, tr., 2 Tribal-184, SE NE NE 13-32n-6w, location, first report.

Hill County: A. B. Cobb 1 Government, SE SE NE 19-27n-15e, T.D. 4,148 ft., testing, small amount oil showing, may acid.

Edwards & Callison 1 Hansen, SW SE NW 25-33n-15e, drilling 1,300 ft.

Liberty County: Montana-Dakota Utilities 1 Oswood, C NE SW 18-35n-4e, drilling 2,699 ft.

Toole County: Lund & Engleking 1 State, NE NE NE 34-35n-4w, T.D. 2,066 ft., break at 2,058-60 ft., acidized 500 gal., no results, will acidize again.

Bosworth & Shubat 1 Lukenbill, C SW NE 11-36n-2w, T.D. 1,926 ft., contact 1,919-23 ft., 1,700 ft., water, will shut off with 5⅛-in. and drill deeper.

M. F. Toles 12 Norum, SW SE SW 33-35n-2w, drilling 1,518 ft. in Madison.

R. G. Parrant 1 McAlpine, SW NW SE 25-37n-3w S.D. 65 ft.

Neostad Oil 2 Hugi, NE SE NW 11-35n-3w, T.D. 1,844 ft., acid. second time, no results, stdg.

Enfield Oil 4 Zachor, SE NW NW 20-35n-1w, T.D. 1,600 ft., contact 1,583-1,600 ft., 200 ft. oil in hole, acid. 1,000 gal.

Adlon Oil & Mines 3-X Ward, SW SW SE 29-35n-3w, T.D. 1,580 ft., running 7-in.

R. G. Parrant 1 Bannister, SW SE SW 35-37n-3w, drilling 140 ft.

Casner T. Olen 3 Government, NW SW NE 14-35n-2w, drilling 810 ft.

Big West Oil 8 Ellingson, C SE SW 14-35n-3w, drilling 1,550 ft., Sunburst 1,470-95 ft.

A. E. Crumley & Son 22 Fryberger, NW NW SE 24-35n-3w, spudded, first report.

E. W. Morton 3 Ellingson, CNL NE NW 23-35n-3w, stdg. 1,724 ft., first report.

Superior Pet. 3-A Government, SE SE NW 24-35n-3w, T.D. 1,428 ft., Sunburst at 1,330-45 ft., running 7-in.

NORTHWEST NEW MEXICO DRILLING REPORT

San Juan County: Al Greer 2 Thompson, SW SE SW 10-30n-11w, drilling 2,083 ft. in coal vein marker above Picture Cliff.

Carroll & Cornell 3 Cornell-Government, C NW SW 12-29n-12w, moving in, Fulcher basin.

Southern Union Production 2 Reid-Government, NE SE NE 13-29n-12w, spudded, Fulcher basin.

Torrance County: Cardinal Oil 1 State, SE SW 3-8n-14e, T.D. 660 ft., running 8¼-in., red beds at 510-625 ft.

MARKET RECORD OF ACTIVE OIL STOCKS . . .

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1941 High	1941 Low	Week ended Aug. 9 High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1940	Com. sh. earn. 1940	Com. sh. earn. 1939	1940 High	1940 Low	1939 High	1939 Low
63½	44	61	60	60	Amerada Corp.	788,675	N.P.	50cQ	7-31-41	$2.00	$2.25	$1.56	58½	38½	74½	50
24¼	19½	22⅝	21⅞	21⅞	Atlantic Refining	2,663,999	$25	25cQ	6-16-41	1.00	2.11	1.66	27⅛	18¼	24⅝	18⅛
10½	7	9½	9	9	Barber Asphalt Co.	390,223	$10	25c	5-21-40	.50	—.48	1.39	16⅝	8½	21	10¼
10½	7⅝	10	9½	9½	Barnsdall Oil Co.	2,558,779	$5	15c	9-8-41	.60	.97	.76	13⅜	7⅛	19½	11⅛
6½	5¼	6⅜	5⅞	5⅞	Consolidated Oil Corp.	13,751,726	N.P.	12½cQ	8-15-41	.72½	.28	.55	8⅛	5½	9⅞	6½
26¾	17⅝	26⅛	25	25⅛	Continental Oil of Delaware	4,682,572	$5	25cQ	9-29-41	1.00	.92	1.35	25	16⅛	31½	19⅞
5	3½	4½	4¼	4¼	Houston Oil	1,098,618	$25	....	10-17-30	....	.30	.43	6⅞	3⅜	9⅜	4½
13⅜	9⅝	13½	12½	12½	Lion Oil Refining	435,815	N.P.	25cQ	7-15-41	1.00	1.05	1.50	14⅜	9	18½	10
17⅞	13	17⅝	16¼	16⅜	Mid-Continent Petroleum	1,857,912	$10	40c	6-21-41	.80	1.60	1.42	17⅜	11½	18	11⅛
14⅜	9⅜	14⅛	13	13	Mission Corporation	1,378,645	$10	25c	12-20-40	.25	1.01	.87	11¾	7⅛	14⅞	8¾
7⅞	4¼	7¾	6¾	6¾	National Supply	1,155,517	$10	....	12-22-37	....	—.49	—.87	9¾	4⅝	15½	5⅝
10	6¾	9¾	9½	9½	Ohio Oil Co.	6,563,377	N.P.	25c	6-14-41	....	1.02	—.10	8¾	5⅜	10½	6
9⅝	5½	9⅜	8½	8½	Pacific Western Oil	1,000,000	N.P.	40c	12-19-39	....	—.21	.81	8⅞	5½	11⅞	7
10½	7¼	10	10	10	Pan American Pet. Trans.	4,702,945	$5	25c	12-21-40	.25	1.20	1.10	10½	6¾	8¾	5
46	35¾	45⅞	45	45	Phillips Petroleum	4,449,052	N.P.	50cQ	5-31-41	2.00	2.60	2.21	41¾	27⅛	46½	31¼
17	14¼	16½	15¾	15¾	Plymouth Oil Co.	1,038,633	$5	30c	6-30-41	‡1.30	1.38	2.38	22¾	15	24	17⅛
10¾	7	10	9⅝	9⅝	Pure Oil Co.	3,982,031	N.P.	25c	12-20-40	.25	1.21	1.11	11½	6¾	11¾	6⅛
10½	7¼	9½	9¼	9½	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-40	.50	.95	.65	9¼	5⅞	10¼	6⅝
17	12½	15¾	15	15	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-41	1.00	1.05	1.40	20	11	24⅜	15½
15¾	10⅛	15⅝	14¾	14¾	Shell Union Oil	13,070,625	N.P.	40c	7-21-41	.75	1.05	.77	13⅛	7⅝	17¼	9⅞
33	18⅞	33	31	31	Skelly Oil	995,349	$15	50c	7-30-41	1.25	3.28	1.99	23¼	12¼	29½	15½
10¾	8¼	10	9¼	9⅜	Socony-Vacuum	31,206,071	$15	25cSA	3-15-41	.50	1.17	1.10	12½	7⅛	15⅛	10¼
24⅝	17⅞	24⅛	23½	23⅜	Standard Oil of California	13,003,953	N.P.	25cQ	6-16-41	1.00	1.73	1.38	26⅛	16¼	33⅝	24¼
34⅛	25½	34⅛	33	33⅝	Standard Oil (Indiana)	15,272,020	$25	25c	6-16-41	1.50	2.20	2.23	29	20¾	30	33⅜
45⅝	33	44⅝	41⅜	41¾	Standard Oil of New Jersey	27,280,998	$25	1.00†	6-16-41	1.75	4.54	3.26	46½	29⅞	53½	38
48½	34¼	48¼	45½	45¾	Standard Oil of Ohio	753,740	$25	37½c	6-14-41	2.00	7.44	6.64	41¾	26¼	32¾	17
60½	50	59	56¼	56¼	Sun Oil	2,434,863	N.P.	25cQ	6-16-41	*1.00	3.03	2.74	65⅞	46¾	66	45¾
2⅜	1⅜	2⅛	1⅞	2	Superior Oil Corp.	1,388,979	$1	10c	12-28-40	.10	.11	.04	2½	1⅛	3⅝	1⅜
44¾	34½	44⅜	41	41⅛	Texas Corp.	10,876,139	$25	50cQ	7-1-41	2.00	2.90	3.02	47⅝	33	50¾	32½
4⅛	2⅞	3¾	3⅝	3⅝	Texas Gulf Producing Co.	888,147	N.P.	10c	6-14-41	.20	.63	.69	4¼	2½	5¾	3¼
7¾	5¼	7½	7¼	7¼	Texas Pacific Coal & Oil	888,236	$10	10c	6-2-41	.40	.54	1.00	8⅝	5⅜	11⅜	7
11¼	9⅜	11	10½	10½	Tide Water Associated	6,371,827	$10	15c	6-2-41	.70	1.14	1.05	12	8¾	14¼	9½
15¼	12¾	15¾	15⅛	15¼	Union Oil Co. of California	4,666,270	$25	25c	5-10-41	1.00	.99	1.25	17½	12	19¾	15⅛
31	25⅝	30½	29⅞	29⅞	Union Tank Car Co.	1,177,381	N.P.	50c	6-2-41	1.75	2.22	2.07	29⅞	22¾	24¼	20⅛
2⅜	1⅝	2	2	2	Wilcox Oil & Gas	470,768	$5	10c	2-15-40	....	.35	.77	3⅝	1¾	4¼	2⅜

*Also 5 per cent in stock. †Includes extras. ‡Also 2 per cent in stock. —Deficit.

New York Curb Exchange

1941 High	1941 Low	Week ended Aug. 9 High	Low	Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1940	Com. sh. earn. 1940	Com. sh. earn. 1939	1940 High	1940 Low	1939 High	1939 Low
¾	¼	⅝	⅝	⅝	American Maracaibo Co.	1,778,415	$1	....	.....	....	—$0.05	—$0.04	1⅛	¼	1¼	½
7⅞	5⅛	7⅜	7	7	American Republics Corp.	1,308,049	$10	10c	7-10-41	....	.78	.14	10¾	4½	11¾	5½
1¾	1	1¾	1⅝	1⅝	Bridgeport Machine Co.	263,700	N.P.	$1.25	12-30-37	....	—.88	—.95	3¼	1⅜	7¼	2½
46	36½	46	45½	45½	Buckeye Pipe Line Co.	200,000	$50	$1	9-15-41	$4.00	5.09	3.13	43	28	34¾	26½
110¼	87	98½	98½	98½	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-23-41	6.00	6.33	7.87	117	95	130	108⅝
6⅝	3⅝	5¾	5	5	Cities Service (new)	3,703,978	$10	....	6-1-32	....	1.72	.68	6¾	4	9¼	4¼
1¾	⅝	1¾	1⅜	1½	Cosden Petroleum	465,332	$1	....	.....	....	....	....	2⅛	⅝	2¼	½
19¾	12½	18⅝	17⅛	17⅛	Creole Petroleum	6,974,356	$5	50cSA†	6-16-41	1.00	.98	1.38	24¼	11⅝	28	16¾
9	3¾	8¾	8¼	8¼	Darby Petroleum	351,390	$5	25c	7-15-41	....	1.12	.03	4⅜	2⅞	7⅛	3⅝
2¼	1	2⅛	2	2	Derby Oil & Refining	263,162	N.P.	....	.....	....	.12	—.37	2	⅝	2⅝	1½
28¾	21¼	21⅝	21⅝	21⅝	Eureka Pipe Line	50,000	$50	50c	8-1-41	2.25	—.49	.63	31	20¼	23	15⅛
39	29	38½	36¼	36½	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-41	1.25	2.44	1.69	39⅞	25⅛	45⅛	29¼
65	52¾	65	64¼	64¾	Humble Oil & Refining	8,987,840	N.P.	37½c	7-1-41	2.00	3.13	3.33	68	47⅛	71	42½
7	5¾	6⅞	6½	6¾	Imperial Oil of Canada	26,965,078	N.P.	25c	6-2-41	.62½	.65	.71	12⅜	5⅜	17	11⅜
5	2¾	4½	4½	4½	Indiana Pipe Line	300,000	$7.50	20c	11-15-40	*2.80	.09	.33	7⅜	3	7¼	5½
11	8⅞	10¼	9⅞	10⅛	International Petroleum	14,324,088	N.P.	50c	6-2-41	1.25	....	1.19	10⅜	8¼	27½	17
2⅝	1¾	2⅛	2⅛	2⅛	Kirby Petroleum Co.	500,000	$1	10c	3-15-41	....	.16	.06	2¾	1⅝	3¾	2⅛
10⅛	8½	9	8¾	8¾	Lone Star Gas	5,518,347	N.P.	20c	4-22-41	.70	1.17	.98	10¾	7⅝	10½	7⅛
5⅝	4⅛	5⅛	5	5	Louisiana Land & Exp.	2,966,762	$1	10c	6-16-41	.35	.29	.22	6¼	3¾	7¾	4
10	9½	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	4-10-41	1.00	1.02	1.52	17	9¼	17	14½
4⅛	2½	4	4	4	Middle States Petroleum "A"	291,970	$1	37c	1-31-41	.63	.31	.37	4⅛	2¾	5¾	2¾
8	7	7¾	7¾	7¾	Midwest Oil Co.	998,474	$10	45c	6-16-41	.90	.88	.99	8½	5½	8¾	6⅝
6⅛	5⅛	5⅜	5¼	5⅜	Mountain Producers	1,593,584	$10	30cSA	6-16-41	.60	.58	.70	6¼	4⅞	6	4⅞
12⅜	10⅛	11¼	11	11¼	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-41	1.00	1.12	.95	13⅛	10	14	11¼
12⅞	10¼	12⅜	12	12⅜	National Transit	509,000	$12.50	50c	6-16-41	1.00	1.08	.91	12½	8¾	9½	7¼
2¼	1	2¼	1¼	2	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.03	.02	1¼	¾	1⅜	1
8¼	6⅝	..	..	..	New York Transit	100,000	$5	30c	4-15-41	.60	.91	.88	7¾	5¼	6	4
9¾	7¾	..	..	..	Northern Pipe Line	120,000	$10	50c	6-2-41	.80	.70	.31	9⅞	6	7	4½
4⅛	2⅝	4¼	4	4⅛	Pantepec Oil	2,856,872	$1	....	.....	....	....	....	5½	2½	7⅝	4
2⅞	1	2⅝	2½	2½	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.04	.70	3¼	1	5	1¼
2⅝	2⅛	..	..	..	Ryan Consolidated	298,931	N.P.	10c	12-28-40	....	.43	.16	3	1¼	3	1⅞
8	6½	..	..	..	Southern Pipe Line	100,000	$10	25c	3-3-41	.50	.81	.25	11¾	4¾	4⅞	3½
43	36⅛	42	41¼	41¼	South Penn Oil	1,000,000	$25	37½c	6-27-41	2.50	2.10	2.84	44	28	40½	26¾
30½	23	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	50c	7-1-41	6.50	3.22	2.06	35	21	23	18
20⅜	17⅞	19¼	19	19¼	Standard Oil of Kentucky	2,604,790	$10	25c	6-16-41	1.30	1.47	1.53	20⅞	16½	20⅛	17¼
2	1⅜	2	1⅞	2	Sunray Oil	1,975,876	$1	5c	12-20-40	.10	.23	.25	2	1⅜	2⅜	1⅜
3¼	2⅝	..	..	..	Texon Oil & Land	936,024	$2	10c	6-28-41	.40	.45	.49	3¼	2	4	2⅝
3⅞	2¼	3⅞	3⅝	3⅝	Transwestern Oil Co.	750,000	$10	....	.....	....	—.59	—1.42	3⅜	2	6	2⅛
⅛	⅛	⅛	⅛	⅛	United Gas Corp.	7,818,959	$1	....	.....	....	—.49	—.55	2⅛	⅝	3⅜	1⅛

*Includes $2.50 capital distribution. †Includes extras. —Deficit.

Personal Paragraphs

H. F. DANGBERG, production engineer for Shell Oil Co., Inc., in California, has returned to his office in Bakersfield, after spending several months on a special assignment in the company's Los Angeles offices.

J. J. STEITZ, JR., and D. L. BARRETT have been appointed assistant managers of the fuel-oil department of Standard Oil Co. of New Jersey and affiliated Esso Marketers. Mr. Steitz will be responsible for marine-fuel sales and will also be office manager. Mr. Barrett will be responsible for industrial fuel and gas-oil sales.

T. L. BENSON, drilling contractor of Shreveport, La., has moved offices to Houston, Tex., where he will operate in the Gulf Coast area.

E. H. MOORE, president, E. H. Moore, Inc., Tulsa, is enjoying a vacation in Honolulu. This is the fourth time the Moores have visited the islands.

WESLEY R. KINNEY, formerly located at Oilfields, Calif., as an exploitation engineer for Shell Oil Co., Inc., has been made assistant exploitation engineer in the division office at Bakersfield, Calif.

H. R. KUNHARDT, JR., president of the Venezuelan Petroleum Co., has returned from a trip to Venezuela where he visited the Santa Barbara oil field, being developed by the company.

GEORGE ARMSTRONG, JR., assistant to the executive vice president of the Republic Oil & Refining Co., Houston, Tex., resigned August 1 and has joined the engineering staff of the Foster Wheeler Corp. at New York.

W. T. KNIGHT, Wichita Falls, Tex., has been appointed by Secretary Ickes, oil coordinator, to the transportation committee for the third district. Mr. Knight is president of Consolidated Oil Co., Wichita Falls.

J. E. NELSON, H. A. GIDNEY and ALAN M. SCAIFE have been elected members of the directorate of Gulf Oil Corp. All three men are members of the corporation's finance committee. Mr. Nelson is vice president, treasurer and secretary of the finance committee, and Mr. Gidney is vice president and comptroller.

COL. ERNEST O. THOMPSON, member of the Texas Railroad Commission, with his regiment is participating in the large-scale maneuvers now under way in Louisiana. He was recently made the commanding officer of the 141st Infantry Regiment of the Thirty-sixth National Guard Division, being transferred from the 111th Quartermaster Regiment. Colonel Thompson continues to be actively interested in the work of the Railroad Commission and over the past several months while stationed at Camp Bowie, Tex., has frequently visited Austin during week ends, in order to direct the work of his office.

RUTH SHELDON KNOWLES, oil writer whose articles have appeared in The Oil and Gas Journal, Saturday Evening Post, and other national magazines, has left the United States for a visit to the oil-producing countries of South America. She will make a report on the oil activities of these countries to Petroleum Coordinator Ickes, whose personal representative she will be on the trip.

ROSS McCOLLUM, president of National Oil Co. of California and head of the Atlas Royalty Co. and Universal Oil Mining Co., has been elected to the board of directors of Bowlus Sailplanes, Inc. DONALD DOUGLAS, chairman of the board of Douglas Oil & Refining Co., which is completing a new refinery and cracking plant at Wilmington, Calif., is also a member of the board of directors of Bowlus Sailplanes, Inc.

A. V. HOENIG, who was vice president in charge of oil production for Indian Territory Illuminating Co., recently absorbed by Cities Service Oil Co., has tendered his resignation, effective September 1. He will devote his entire time to his personal properties. R. J. DAUGHERTY, longtime Cities Service public relations head, retains that capacity under the new title of superintendent of the public relations department.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

About 1 year ago, F. G. Furman bought a quarter section oil lease 1 mile northwest of El Dorado, Kans., for $250. Last week, he sold the same lease to E. B. McCrage of Tulsa for $25,000.

C. E. Raney of Nowata, Okla., has concluded to change his occupation from that of oil man to a naval man. He has entered the United States service on the battleship Louisiana at Norfolk, Va.

Efforts of the British Government to develop an important oil industry in Persia seem to be expensive and, as yet, are lacking in satisfactory results.

20 YEARS AGO

Walter Hennig, widely known oil man, died at his home in St. Louis, Mo., July 31. Mr. Hennig was active in the development of the Augusta pool, in Kansas, and after selling his holdings there, moved to St. Louis. He was 60 years old.

The Standard Oil Co. of Indiana is proposing to make Casper, Wyo., the greatest oil storage center in the world.

Texas' new point of interest around Mexia looks as though it can be compared favorably with the sensational developments at Burkburnett, Ranger and Breckenridge.

10 YEARS AGO

The order of Gov. William H. Murray of Oklahoma shutting in all producing wells in prorated oil fields except those making less than 25 bbl. daily resulted in a decline in Oklahoma's production last week of slightly less than 4,000 bbl. daily.

Judging by the work already done in the East Texas field, it would seem that this area will prove a prolific market for the sale of all kinds of equipment and supplies for many years to come.

J. W. REES has been appointed manager of the personnel department of Pure Oil Co., Chicago, Ill. Mr. Rees has been in charge of the personnel of the central office and its office management.

RALPH W. HUFFERD, research chemist of the Kendall Refining Co., Bradford, Pa., has been called into active service as a lieutenant colonel in the Chemical Warfare Service and is temporarily stationed at Washington, D. C.

DR. ROBERT E. WILSON, vice president of the Pan American Petroleum & Transport Corp., who recently resigned as oil adviser to the Office of Production Management, is taking a brief vacation before resuming his duties with the company.

BASIL HOPPER, of Union Oil Co., has been appointed supervisor of plant process;; E. G. RAGATZ has been appointed supervisor of economics and planning, and SHERMAN DOTY has been appointed supervisor of operations in the refining department.

LT. DONALD WEIR is being granted a leave of absence from the insurance department of the Arkansas Natural Gas Co. and affiliated companies, Shreveport, La., to enter active duty in the U. S. Army, Sixth Field Artillery Battalion, Fort Bragg, N. C.

E. G. DAHLGREN, who has been connected with the Oil and Gas Unit of the Securities and Exchange Commission, has begun new duties as a senior petroleum analyst in the Office of Petroleum Coordinator for National Defense. He is working under ROBERT ALLEN, director of the Petroleum Division.

J. M. GREER, chief counsel of the Gulf Oil Corp., and Mrs. Greer sailed August 8 for Venezuela, where they are expected to stay for about a week.

EMIL B. COCKRUM, graduate in geology from the University of Texas, is a trainee with Carter Oil Co. in its southern division office at Shreveport, La.

DONALD TRAVIS MAST, assistant engineer with Union Producing Co., Beeville, Tex., has been assigned to the Second Quartermaster Training Regiment at Fort Francis E. Warren, Cheyenne, Wyo.

STANLEY McDONALD, formerly employed by the Louisiana State Geological Survey, has been promoted to the position of geologist with the Minerals Division, Department of Conservation, replacing WILLIAM A. ROMANS.

JUSTIN P. RAMSEY, McAllen, Tex.; W. C. TEUTSCH, Springhill, La., and JACK T. ROCHE, Taft, Calif., oil drillers for Socony-Vacuum Oil Co., Inc., were aboard the American South African liner, City of New York, which arrived in New York last week. They have spent 2½ years in Egypt.

HENRY WARREN WILSON has been elected president of Panhandle Producing & Refining Co. to succeed the late William Rhodes Davis. Mr. Wilson was formerly a vice president and general manager of the company. HARVEY C. CARTER, president, Oil Trading Co., Ltd., was elected a director to succeed Mr. Davis.

R. N. KEPPEL, vice president and director of Standard Oil Co. of Pennsylvania, was elected president at a recent meeting of directors. At the same meeting, E. H. COLLINS, general sales manager with offices in Pennsylvania, was reelected vice president. New directors are G. E. BUBAR and H. W. CHAPIN, both of New York.

Diligent Worker

A. E. "Eddie" Booth, one of the best known producers in the Bradford field of the Pennsylvania region, is one of the stalwarts in trade-association activities. He has been in the forefront in every effort to further the interest and safeguard the future of the industry in the eastern fields.

A. E. BOOTH

He is the second generation of producers in that area. His father, A. B. Booth, and his uncle, H. A. Booth, operating under the firm name of Booth Brothers, were active in the Warren and Bradford fields from about 1880 on.

Born in Bradford, he was graduated from Princeton University and friends recall his outstanding work as a tackle on the Tiger football team. He still looks as if he could slice a big hole in an Ivy League line.

Soon after graduation he entered the oil business and was not long in recognizing the value of trade associations. He was active in the old Northwestern Pennsylvania Oil Producers Association and served as president for 8 years. Noting the need of a Bradford organization, he was one of the leaders in the formation of the Bradford District Pennsylvania Oil Producers Association, which grew out of the old body. He was the first president of the Bradford association and then served for 9 years as treasurer.

He likewise has been prominent in the affairs of the Pennsylvania Grade Crude Oil Association, serving as a director and a member of the production advisory committee.

His interest in other phases of the business is indicated by his place on the board of directors of the Kendall Refining Co., of Bradford and the Bovaird Supply Co., with headquarters in Tulsa.

A bit too busy for hobbies, he admitted the need of some. He could hardly be termed a golfer, he said, and his coin-collecting interest is chiefly for his daughter.

JOSEPH GLASS, New York City, president of Midstates Oil Corp., of Tulsa, has been named a member of the production advisory committee for District 1.

E. H. TOWNSEND, district superintendent of recycling operations for Lone Star Gas System, received a broken leg recently when he jumped from his burning Dallas, Tex., apartment during early-morning hours.

A. L. SHANER, oil producer and president of Allegany Refiners, Inc., Bolivar, N. Y., was painfully injured last week when a sledge hammer flew and struck him above the ear in a lease mishap. Several stitches were required to close the wound.

C. J. GIBSON, drilling superintendent for Rocky Mountain Drilling Co., has returned to his office at Casper, Wyo., after spending a month in California where he was engaged in relief work at the wells being drilled by his company in the Baldwin Hills.

DR. W. F. BAILEY has returned to Midland, Tex., after an absence of 4½ years to assume the position of district geologist for Skelly Oil Co. His family will shortly joint him. For the past 3 years, Dr. Bailey has been district geologist for Skelly at Shreveport, La.

G. P. MORVAY, an engineer for the Hungarian mining department, is visiting Mid-Continent oil operations, studying equipment used and various procedures for finding and producing oil. Mr. Morvay visited the International Petroleum Exposition last year.

DAN GRADY and PAUL MONTGOMERY, petroleum engineers in the Lafayette district of the Louisiana Department of Conservation, have resigned to accept positions in the industry. Three other engineers with the department have also resigned to enter the industry; C. B. McEACHERN and HERBERT WINK of the Shreveport district, and E. B. WHARTON of the Monroe district.

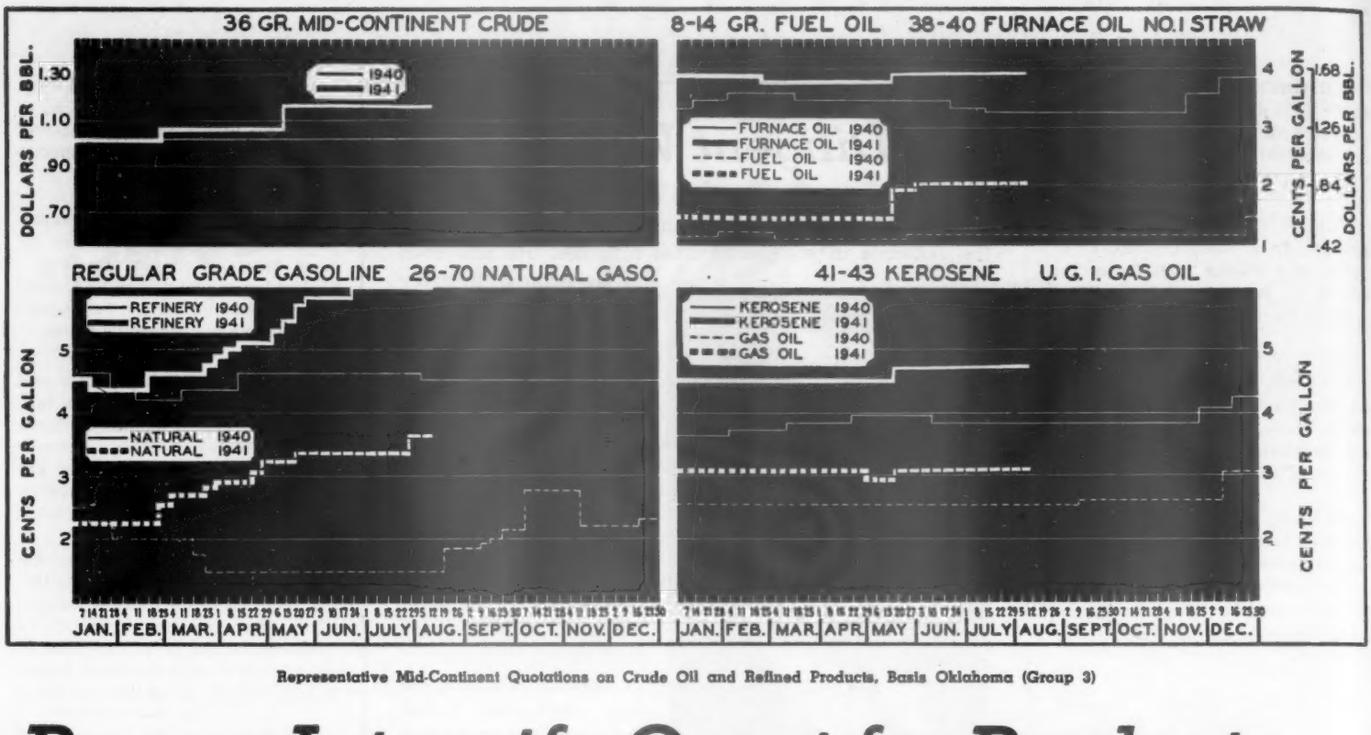
W. F. FULTON, chief chemist, United Gas Pipe Line Co., has been named to serve on the technical committee of the Natural Gasoline Association of America. This committee, consisting of four men, will continue studies leading to possible standardization of fractional distillation apparatus and procedure for both gases and liquids.

Shifts: DALE O. SMITH, superintendent, McCollum Oil Co., from McAllen, Tex., to Santa Anna, Tex.; J. A. FLETCHER, superintendent, Barnsdall Oil Co., from Gladewater, Tex., to Mankins, Tex.; DONALD B. EDWARDS, engineer, Continental Oil Co., from Houston, Tex., to Ponca City, Okla.; LOUIS O. STORM, engineer, Shell Oil Co., Inc., from White Castle, La., to Iowa, La.; A. E. McDANIEL, superintendent, Olson Drilling Co., from Olney, Ill., to Fort Smith, Ark.; JOHN F. CONLEY, superintendent, Magnolia Petroleum Co., from El Dorado, Kans., to Ellinwood, Kans.; P. T. AMSTUTZ, JR., engineer, Phillips Petroleum Co., from Great Bend, Kans., to Lawrence, Kans.; S. A. HAYWARD, superintendent, Olson Drilling Co., from Great Bend, Kans., to Okemah, Okla.; L. M. FLEMING, engineer, Kaw Pipe Line Co., from Rochester, Minn., to Claflin, Kans.; CHESTER IMES, president, United American Petroleum Co., from Tulsa to Fort Worth, Tex.; W. B. CRUTCHER, superintendent, Carter Oil Co., from Tulsa to Seminole, Okla.

J. COOKE WILSON, one of the pioneer operators of the historic Spindletop oil field, has been selected as general chairman for the Spindletop anniversary convention of the Texas Mid-Continent Oil and Gas Association at Beaumont, October 9-11. E. W. GILDART was named as vice chairman of the convention arrangements committee, and BRYAN McADAMS, secretary. This year is the fortieth anniversary of Spindletop.

WALTER E. SKINNER, compiler of the Oil and Petroleum Year Book, asks that secretaries of companies will make a note of his change of address to 20, Copthall Avenue, London, E. C. 2, England. This will insure all future annual reports and other documents being received promptly. This change of address was necessitated because of the destruction of previous offices by enemy action.

JESS RECTOR, formerly a driller for Sam Brooks Drilling Co., Los Angeles, Calif., was recently made superintendent for Western Drilling Co., Ltd., of Canada, a company owned by E. L. CORD, Indianapolis automobile manufacturer and industrialist. Mr. Rector has established his headquarters at the Twin Rivers camp of the company, where a test is being drilled. E. S. VALLIANT has been made managing director of Western Drilling Co., Ltd., at Lethbridge, Canada.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Buyers Intensify Quest for Products In Mid-Continent Refinery Market

By H. STANLEY NORMAN

QUEST for larger supplies of motor fuel and burning oils in the Mid-Continent refinery market was intensified this week. Stocks are tightly held and open-market traders report that it is practically impossible to purchase motor fuel for reasonably prompt loading.

Inquiries from several major companies are in the Mid-Continent market but there is slight prospect that more than a small percentage of their wants will be accommodated. Refiners throughout the Mid-Continent report their stock position at near minimum working requirements and that they are generally behind on shipping instructions from 3 to 4 weeks.

Inquiries continue to reach the Mid-Continent market from sections of the country previously beyond reach of Group 3 refiners because of freight differentials. The reduction of freight rates in June made it possible to reach a larger territory. Still, the lower rates would not be sufficient in themselves to account for the inquiries that are now reaching the Mid-Continent market. One Group 3 refiner this week reported receipt of an inquiry for gasoline from a prospective buyer in Virginia.

Basic Markets Unchanged

There has been no material change in the basic Group 3 refinery market this week. There has been considerable discussion in some quarters about higher crude prices which, if they develop, would likely force an advance in motor fuel and burning-oil quotations. Regular gasoline of 72-74 A.S.T.M. specification is quoted at 6 to 6.25 cents per gallon. Under existing conditions, Group 3 refiners are in position to take advantage of any freight-rate differentials accruing to the shipper on deliveries near the plant.

There has been no order from OPACS directed specifically at Mid-Continent refiners, although the general attitude of the price-control office opposing advances in basic petroleum markets undoubtedly is a factor in holding both crude and refined quotations at their current levels. Under normal circumstances, the motor-fuel market doubtless would be 0.5 to 0.75 cent per gallon above current quotations.

Distillate fuel oils are in active demand from northern buyers. Movement of heating oils, however, is limited because Mid-Continent refinery operators are still cracking all available material in an effort to satisfy the demand for gasoline. The limited volume of distillate fuel produced under present operating schedules is being stored in most instances. This is not to say that no distillate fuel is being shipped from the Mid-Continent because certain quantities move against contracts without particular consideration for seasons. Still, the shipments against spot orders are strictly limited.

Refined Oil Market Barometer

Steadily increasing demand for petroleum products in all sections of the country east of the Rocky Mountains is maintaining markets in the strongest position since 1937. Prices on most products are slightly below the levels of 4 years ago, but they are being depressed by the artificial ceilings of OPACS. Refiners are exercising rather strict control over shipments even delving into the urgency of the customers' orders.

MID-CONTINENT: Buyers are unable to locate spot gasoline.

GULF COAST: Gasoline price ceiling discouraging trade.

CALIFORNIA: Most products dull; trading limited.

PENNSYLVANIA: Kerosene slightly higher.

CHICAGO: Market scouted for additional motor fuel.

Forward Bookings Expand

Some buyers in the northern states are placing orders on Mid-Continent refiners' books as far ahead as mid-September. The continual drumming from the petroleum coordinator's office for a reduction in consumption of gasoline is apparently unheeded in the Mid-Continent marketing territory. Operators in this section of the country are unable to find cause for curtailment, although they are being compelled to control and prorate the rate of deliveries in an effort to satisfy customers. Contract buyers are willing and anxious to receive more gasoline than the maximum specified in their agreements with suppliers but the shortage of supplies is compelling refiners to limit deliveries to quantities covered by commitments.

In recent years, when buyers were in control of petroleum markets, suppliers were frequently forced to make concessions not only on prices but on shipments. For instance, a contract calling for delivery of 10 to 15 cars of gasoline per month was often violated to the extent that the customer could accept only 8 cars one month and would want 18 cars the next. All such latitudes granted in the past are unacceptable to refiners at present.

A bulge in demand and possibly in prices for kerosene is anticipated by Mid-Continent refiners within the next 2 or 3 weeks. Buyers are beginning to scout the market for kerosene to be consumed in northern states during the early fall months.

Talk of Rationing and Curb on Prices Confuse Eastern Market

By J. P. O'DONNELL

NEW YORK, Aug. 12.—There were relatively few oil-price changes in the Atlantic seaboard area last week. Lubricating oils and paraffin wax spot quotations fluctuated considerably, with Pennsylvania oils rising to new high levels for the year and then reacting somewhat in the local spot market on reports that the OPACS had requested a ceiling be placed on 200-viscosity 25-pour test neutral oil at 33 cents a gallon, f.o.b. Pennsylvania refineries. White crude-scale wax sold off slightly early in the week, with reports of some sales at 4.75 cents a pound, but rallied subsequently to 5 cents a pound. As much as 5.25 cents a pound is now being paid for this material and the current trend in the wax market is strong.

Chief interest in the local refined-oil markets continued to center in the gasoline situation. Announcement of service-station closing plans and the later program for rationing to come in September, coupled with the "big stick" being wielded in Washington on prices, served only to confuse the market further. It can be stated with a high degree of certainty that none of the major oil suppliers in the Atlantic seaboard area has placed in effect any important price changes in the wholesale gasoline market since early June. So far as can be learned, the service-station closings have not affected wholesale or retail motor-fuel quotations in any way, barring minor adjustments in very limited areas. For instance, an independent marketers' group in a section of the New York metropolitan area announced an advance of 0.5 cent a gallon in service-station retail prices to take effect early in the week. So far as could be learned this action has not spread beyond the limited area covered by members of the association. It did not apply to all service stations in the area involved.

In another section of the metropolitan area indications of retail price cutting have been evident for several weeks, and are still noticeable. One factor in this situation, it is reported, is the growing fear of a drastic curtailment in sales in the near future. Some service-station operators are accordingly trying to get a larger share of present business in view of the future outlook.

While no important price movements have yet resulted as an outcome of anticipated rationing, discussion of conservation of motor fuel in the metropolitan area probably has eased the market under the surface. Spot prices have been stationary for some weeks. Some suppliers of 72-74 A.S.T.M. motor gasoline believe that spot quotations would now have been higher throughout the East Coast area if rationing were not in prospect. It is difficult to project a rising market for a product the demand for which is to be drastically cut, probably within a month or 6 weeks at the most.

The inauguration of gasoline-card rationing by September 15, under state supervision, has been practically decided upon by the local national-defense oil-marketing committee and by the federal oil coordinator's office, it is believed. Restrictions of civilian consumption to 15 gal. per week is believed most widely discussed in official circles. This is estimated to be equal to about 66 per cent of present civilian consumption.

There has been little reduction in gasoline consumption on the Atlantic Coast since the closing of service stations from 7 p.m. to 7 a.m. daily went into effect August 3. This is said to be in line with expectations. The closing plan was designed more to bring the need for rationing clearly before the Atlantic Coast consumer. It has done that and has prepared their minds for card rationing.

Most opposition to card rationing, if any develops, will probably arise in the New England area, where gasoline dealer and automobile associations are closely watching developments in Canada. The New England groups feel that American motorists should not be asked to accept more sacrifices than Canadian motorists. Card rationing has not been placed in effect in Canada as yet and is not contemplated according to reports from the dominion. Several spokesmen for New England groups have protested reported proposals for card rationing on the East Coast of the United States beginning in September.

Heating oils have been in relatively strong demand for this season of the year and firm in price throughout the North Atlantic states during the past week. Reports of slightly higher prices having been paid in the spot market for kerosene, No. 2 fuel oil and No. 6 fuel oil are being heard. The spot market already is 3 to 4 cents a gallon higher than the contract price in the New York Harbor area.

Interest in the oil-export market has been considerably increased by official reports of higher shipments in May and more recent reports of sales to Great Britain under the Lease-Lend Act. Gulf Coast refiners have been receiving a substantial volume of export trade under the act, it is said. Most of the individual orders have been relatively small in volume, involving five or six cargoes each. These can be handled by the independent refiners, as well as by the major suppliers in the Gulf Coast area. The advantage of

(Continued on Page 111)

Uncertainties Restrict Spot Trading in Gulf Coast Market

HOUSTON, Tex., Aug. 11.—The Gulf Coast refinery market continues to mark time with spot trading restricted by limited transportation facilities and by uncertainties, so far as gasolines are concerned, growing from the 6-cent ceiling set on the price. Quotations on all products are pretty much pegged pending developments in the transportation and price-fixing situations.

Movement of gasolines on prior commitments is heavy but no new sales are being made. Although 6 cents has been proposed as the top base price for gasoline, most of the movements still are on the basis of 6.25 cents. Sellers have made no move to reduce quotations from the levels established prior to the announcement of the 6-cent ceiling.

Very little gasoline is on hand at Gulf Coast refineries for spot sale regardless of price. Most suppliers are sold up at least until September. Hence sellers have had no occasion to reduce previous quotations.

As to other products, sellers still are maintaining firm quotations in the absence of spot business. Utilization of gas-oil supplies in cracking to boost gasoline recoveries is taking care of these stocks, and supplies are not excessively burdensome. The present quotation of 3½ cents for No. 2 fuel is considered relatively low, and it is doubtful if a buyer, although able to move the material, could obtain it under that figure.

Several cargo sales of Bunker C fuel a couple of weeks ago cleaned up that market in good shape, and there is not much of this material left for open sale. Quotations remain firm at 85 cents.

A.P.I. Weekly Refinery Statistics

Week Ended August 9, 1941

	Capacity reporting (per cent)	Total gasoline stocks (bbl.)	Residual fuel-oil stocks (bbl.)	Gas oil and distillate stocks (bbl.)	Daily crude runs (bbl.)
East Coast	100.0	21,686,000	9,638,000	13,782,000	610 000
Appalachian	83.8	3,196,000	550,000	528,000	115.000
Ind., Ill., and Ky.	84.4	15,442,000	3,929,000	4,638,000	601,000
Okla., Kans., and Mo.	80.7	6,757,000	2,002,000	1,797,000	300 000
Inland Texas	63.2	2,145,000	1,318,000	424,000	143,000
Texas Gulf	91.0	11,975,000	8,326,000	6,226,000	957,000
Louisiana Gulf	89.1	3,183,000	1,788,000	1,631,000	147,000
N. Louisiana and Ark.	49.9	392,000	411,000	292,000	51,000
Rocky Mountains	50.1	1,200,000	441,000	129,000	45,000
California	90.9	14,136,000	65,484,000	11,759,000	526,000
Total reported	86.3	80,112,000	93,887,000	41,206,000	3,495,000
Est. unreported		5,910,000	1,525,000	930,000	340,000
*Est. total		†86,022,000	95,412,000	42,136,000	3,835,000
*Est. total previous wk.		86,779,000	94,800,000	41,433,000	3,845,000
*Aug. 10, 1940		87,681,000	106,487,000	40,865,000	3,435,000

*Bureau of Mines. †Includes 7,772,000 bbl. aviation gasoline.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ended August 2, 1941	252,525,000 barrels
Week ended July 26, 1941	252,728,000 barrels
Week ended August 3, 1940	264,297,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

RETAIL OIL MARKETS...

Tank-wagon and filling-station prices on gasoline and kerosene furnished by larger marketing firms

Prices as of August 12, 1941

Taxes

The gasoline quotations given in the following tables include the 1½-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline Tank wag.	Dlr.	Inc. tax	Kero. tank wag.
Chicago, Ill.	16.1	14.1	4.5	10.3
Decatur	15.4	13.9	4.5	9.5
Joliet	16.4	14.1	4.5	10.3
Peoria	16.2	14.7	4.5	10.1
Quincy	15.4	12.4	4.5	10.0
Davenport, Ia.	16.2	14.7	4.5	10.1
Des Moines	15.9	12.9	4.5	9.8
Mason City	16.2	14.7	4.5	10.1
Duluth, Minn.	17.7	16.2	5.5	10.6
Mankato	17.4	15.9	5.5	10.3
Minneapolis	17.4	15.9	5.5	10.3
La Crosse, Wis.	17.4	15.9	5.5	10.3
Green Bay	17.7	16.2	5.5	10.6
Milwaukee	17.6	16.1	5.5	10.5
Detroit, Mich.	15.9	14.4	4.5	9.6
Grand Rapids	15.9	14.4	4.5	9.6
Saginaw	15.9	14.4	4.5	9.6
Evansville, Ind.	16.9	15.4	5.5	9.6
Indianapolis	17.1	15.2	5.5	9.8
South Bend	17.5	16.0	5.5	10.2
Fargo, N. D.	18.4	16.9	5.5	11.3
Huron, S. D.	17.8	16.3	5.5	10.7
Kansas City, Mo.	14.9	13.4	4.5	9.4
St. Louis	14.4	12.9	4.5	9.8
St. Joseph	15.7	14.2	4.5	9.6
Wichita, Kans.	14.8	13.3	4.5	8.0

***State tax 2 cents, 1-cent city tax, and 1½-cent federal tax.**

Exclusive of state general sales taxes.

Discounts to commercial consumers. On purchases per month off tank-wagon prices: 1,000 gal. or more, 1.5 cents off, minimum delivery 25 gal.

Stanolex Fuel Oil in Chicago

Effective July 17, 1941, f.o.b. Chicago, tank-wagon prices: Standard heater oil, 1-99 gal., 8.75 cents; 100-149 gal., 7.75 cents; 150 gal. and over, 7.25 cents. Stanolex fuel oil No. 1, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex furnace oil, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex fuel oil A, 1-99 gal., 8.0 cents; 100-399 gal., 7.0 cents; 400-749 gal., 6.0 cents, 750 gal. and over, 5.25 cents. Stanolex fuel oil B, 1-99 gal., 8.0 cents 100-399 gal., 7.0 cents; 400-749 gal., 6.0 cents; 750 gal. and over 5.25 cents. Stanolex Bunker C fuel oil, 1-399 gal., 6.5 cents; 400-999 gal., 5.5 cents; 1,000 gal. and over, 4.5 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Cons'r tank wag.	Dlr.	Divided Inc. tax	Kero. tank wag.
Ohio points	16.0	15.0	5.5	*9.0

***Includes state tax of 1 cent.**

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline Cons'r tank wag.	Net dlr.	Inc. tax	Kero. tank wag.
Atlanta, Ga.	18.00	18.00	7.5	10.0
Augusta	18.00	18.00	7.5	9.5
Macon	18.00	18.00	7.5	10.0
Savannah	17.00	17.00	7.5	9.0
Birmingham	18.50	18.50	8.5	8.0
Mobile	18.50	18.50	9.5	8.5
Montgomery	19.50	19.50	9.5	10.0
Jackson, Miss.	17.00	17.00	7.5	9.0
Vicksburg	17.00	17.00	7.5	8.5
Jacksonville, Fla.	18.00	18.00	8.5	8.0
Miami	18.00	18.00	8.5	8.0
Pensacola	18.50	18.50	9.5	8.0
Tampa	18.00	18.00	8.5	8.0
Lexington, Ky.	17.00	17.00	6.5	9.0
Covington	15.0	15.0	6.5	9.0
Louisville	16.50	16.50	6.5	8.5
Paducah	16.50	16.50	6.5	8.5

Price basis to tank-wagon consumers, effective January 4, 1937, 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax, and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
Atlantic City	13.0	14.0	4.5	7.8
Newark	13.0	14.0	4.5	7.8
Annapolis	13.85	15.35	5.5	9.5
Baltimore	13.25	14.75	5.5	8.5
Cumberland	14.65	16.15	5.5	10.0
Washington, D. C.	11.50	13.00	3.5	9.0
Danville, Va.	15.45	17.45	6.5	10.25
Norfolk	14.25	16.25	6.5	10.00
Petersburg	14.55	16.55	6.5	11.00
Richmond	14.55	16.55	6.5	11.00
Roanoke	15.75	17.75	6.5	10.50
Charles'n, W. Va.	15.55	18.05	6.5	11.5
Parkersburg	14.85	17.35	6.5	11.2
Wheeling	15.25	17.35	6.5	11.8
Charlotte, N. C.	17.40	18.90	7.5	9.3
Hickory	17.95	19.45	7.5	10.3
Mount Airy	17.80	19.30	7.5	9.5
Raleigh	17.15	18.65	7.0	10.3
Salisbury	17.45	18.95	7.5	10.7
Charleston, S. C.	15.25	17.75	7.5	9.25
Columbia	16.10	18.60	7.5	(*)
Spartanburg	16.80	19.30	7.5	(*)

Price basis to Essolene undivided dealers: Dealer tank-wagon price less 0.5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at a time by hose connection, on yearly purchases: From 2,500 to 100,000 gal., consumer tank-wagon price at time and place of delivery: 100,000 gal. per year, consumer tank-car price plus 0.5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less 0.5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gal. or more, consumer tank-wagon price. Single deliveries of less than 50 gal., 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less 0.5 cent per gallon. The above policy also applies in South Carolina, effective January 23, 1939.

*Kerosene business of the company at these points now exclusively handled by dealers.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
Philadelphia, Pa.	14.0	15.0	5.5	10.0
Pittsburgh	14.5	15.5	5.5	10.5
Allentown	14.5	15.5	5.5	10.5
Erie	14.5	15.5	5.5	10.0
Scranton	14.5	15.5	5.5	10.5
Altoona	14.5	15.5	5.5	10.5
Dover, Del.	...	15.5	5.5	10.5
Wilmington	...	15.0	5.5	10.0

Price basis to undivided dealers, dealer tank-wagon price less 0.5 cent per gallon.

Discount on kerosene, 2 cents per gallon off tank-wagon price on tank-wagon deliveries of 25 gal. or more at one time.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank truck	Serv. sta.	Inc. tax	Kero. tank wag.
San Francisco	17.5	18.5	4.5	11.5
Los Angeles	17.0	18.0	4.5	10.0
Fresno, Calif.	18.5	19.5	4.5	12.5
Phoenix, Ariz.	21.5	22.5	6.5	12.5
Reno, Nev.	20.5	21.5	5.5	13.5
Portland, Ore.	20.0	21.0	6.5	13.5
Seattle, Wash.	20.0	21.0	6.5	13.5
Spokane	21.5	22.5	6.5	16.5
Tacoma	20.0	21.0	6.5	13.5

Discount to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gal. and over, advance quantity discount extended at time of delivery, 3 cents. Service-station schedule applies on single deliveries less than 40 gal. On kerosene in tank-car, transport-truck, and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank wagon.

March 18, 1939, split dealer discount was canceled.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Comm. tank wag.	Dlr.* tank wag.	Inc. tax	Kero. tank wag.
Albany	14.2	14.7	5.5	7.6
Met. New York	14.4	14.9	5.5	7.9
Buffalo	14.5	15.0	5.5	8.3
Rochester	15.1	15.6	5.5	8.8
Syracuse	14.8	15.3	5.5	8.7
Portland, Me.	14.6	15.1	5.5	8.0
Manchester, N. H.	15.6	16.1	5.5	8.9
Burlington, Vt.	15.2	15.7	5.5	8.2
Boston, Mass.	13.2	13.7	4.5	7.9
Worcester	13.8	14.3	4.5	8.0
Hartford, Conn.	13.9	14.4	4.5	7.5
New Haven	13.3	13.8	4.5	6.8
Providence, R. I.	13.3	13.8	4.5	7.7

*Undivided.

Effective August 8, 1940, the company changed its commercial consumer policy in New York and New England to the following:

Full compartment deliveries: Accounts buying less than 20,000 gal. annually, 0.5 cent above the commercial-consumer price; accounts buying from 20,000 to 120,000 gal. annually, commercial-consumer price; accounts buying 120,000 gal. annually and above, 0.25 cent off consumer price. Split compartment deliveries: Delivery of less than a full compartment, 250 gal., commercial-consumer price plus 1 cent. Steel-barrel deliveries: Commercial price plus 3 cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank wag.	Inc. tax	Kero. tank wag.
Denver, Colo.	14.5	5.5	11.0
Grand Junction	18.0	5.5	12.5
Pueblo	14.5	5.5	9.5
Casper, Wyo.	17.0	5.5	12.0
Cheyenne	16.0	5.5	11.5
Billings, Mont.	18.0	6.5	12.5
Butte	17.0	6.5	13.5
Great Falls	17.0	6.5	12.5
Helena	17.0	6.5	13.0
Salt Lake, Utah	18.5	6.5	14.5
Boise, Idaho	†20.1	6.5	16.5
Twin Falls	†21.1	6.5	17.0
Albuquerque, N. M.	*17.5	7.0	10.0
Roswell	*15.5	7.0	8.5
Santa Fe	‡18.0	7.5	10.0

*Includes city tax of 0.5 cent. †Includes toll-bridge tax of 1 mill. ‡Includes city tax of 1 cent.

Tank wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
New Orleans, La.	15.25	17.25	8.5	‡10.0
Baton Rouge	15.25	17.25	8.5	‡10.5
Alexandria	15.25	17.25	8.5	‡10.5
Lafayette	15.50	18.00	8.5	‡10.0
Lake Charles	15.50	18.00	8.5	‡10.0
Shreveport	15.0	17.5	8.5	10.0
Knoxville, Tenn.	18.00	20.50	8.5	12.5
Memphis	16.25	18.75	8.5	10.5
Chattanooga	17.50	19.5	8.5	11.0
Nashville	17.75	19.5	8.5	10.0
Bristol	18.25	18.75	8.5	12.0

Essolene at dealer price less 0.5 cent per gallon to undivided dealers.

‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gal. or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gal. at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less 0.5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gal., consumer tank car plus 2 cents per gallon 50 to 199 gal., consumer tank car plus 1 cent per gallon; 200 gal. and over, consumer tank car plus 0.5 cent per gallon.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Tank wag.	Inc. tax	Kero. tank wag.
Texarkana, Ark.	14.0	5.5	6.0
Fort Smith	15.5	7.0	6.5
Little Rock	17.25	8.0	8.0
Muskogee, Okla.	15.5	7.0	8.0
Oklahoma City	15.0	7.0	8.0
Tulsa	15.0	7.0	8.0

Tank wagon represents price to consumers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline* Tank wag.	Dlr.	Incl. tax	Kero. tank wag.
Omaha	17.9	15.4	6.5	9.8
McCook	18.5	15.9	6.5	9.5
Norfolk	18.4	16.9	6.5	10.3
North Platte	18.8	16.4	6.5	10.7
Scottsbluff	18.9	16.0	6.0	10.0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Texas

	Gasoline Tank wag.	Serv. sta.	Incl. tax	Kero. tank wag.
Dallas, Tex.	13.0	16.5	5.5	7.0
Fort Worth	13.0	16.5	5.5	7.0
Houston	13.0	17.0	5.5	8.0
San Antonio	13.0	17.0	5.5	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	16.2
V.M.&P. naphtha	16.5
Cleaners' naphtha	15.5
Stanisol	15.5

***Prices include 3-cent Illinois tax but not 1-cent federal tax nor 2 per cent retail occupational tax.**

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gal. lots if covered by contract.

Canada*

3-Star Imperial Gasoline

IMPERIAL OIL, LTD.

	Gasoline Tank wag.	Incl. tax	Kero. tank wag.
Halifax, N. S.	28.5	13.0	19.0
St. John, N. B.	28.5	13.0	19.0
Montreal, Que.	27.0	11.0	17.5
Toronto, Ont.	27.5	11.0	18.0
Hamilton, Ont.	27.5	11.0	18.0
Winnipeg, Man.	30.5	10.0	22.5
Brandon, Man.	31.0	10.0	23.0
Regina, Sask.	28.0	10.0	20.0
Saskatoon, Sask.	30.8	10.0	22.8
Edmonton, Alta.	28.9	10.0	20.9
Calgary, Alta.	26.0	10.0	18.0
Vancouver, B. C.	25.0	10.0	24.0

***Imperial gallon used in Canada.**

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In Maritime Provinces both divided and undivided dealers pay tank-wagon price.

Tank-Wagon Changes

Standard Oil Co. of Nebraska, effective July 31, advanced all gasoline prices to normal that were 0.5 cent or less below normal. Tank-wagon price was raised 0.9 cent at Omaha and 0.5 cent at Scottsbluff. Dealer prices were raised 0.5 cent per gallon at Omaha, McCook, North Platte and Scottsbluff.

Standard Oil Co. (Indiana) advanced the dealer gasoline price 0.5 cent per gallon August 5 at Decatur, Peoria and Quincy, Ill. The tank-wagon price was advanced 0.5 cent August 5 at Quincy. Dealer price was raised 0.5 cent August 1 at Kansas City, Mo., and 0.6 cent per gallon at Wichita, Kans., on the same day. The tank-wagon price was advanced 0.5 cent per gallon August 1. Standard advanced the kerosene tank-wagon price 0.5 cent per gallon August 5 at Decatur, Ill. The company advanced kerosene 0.3 cent per gallon August 1 at Kansas City and 0.7 cent per gallon at St. Joseph, Mo.

PRICES OF REFINED PRODUCTS...

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of August 12, 1941
(Most prices in cents per gallon)

The quotations are exclusive of the federal excise taxes of 1.5 cents a gallon on gasoline and 4 cents a gallon on lubricating oils. Octane ratings in Middle West, Mid-Continent, and Southwest are based on A.S.T.M. method of testing.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055
60-62 400 grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055

NORTH TEXAS—

U. S. Motor grades:		
72-74 octane (regular)	.05875	.06125
63-66 octane	.0550	.06
60 octane and below	.05125	.05375
60-62 400	.05	.06

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
72-74 octane (regular)	.05875	.06125
63-66 octane	.0550	.05875
60 octane and below	.05	.06

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
72-74 octane (regular)	.05875	.06125
60 octane and below	.05	.05375

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055
60-62 400 grades:		
72-74 octane (regular)	.06	.0625
63-66 octane	.05625	.05875
60 octane and below	.0525	.055

PENNSYLVANIA (inland refineries)—

74-76 octane (regular)	.0750	.0775
80 octane (1939 Research)		.0800

CALIFORNIA (domestic movement)—

58-60 400, 65 oct. and higher	.06	.07
54-58 U. S. Motor	.0575	.0625

EAST COAST (domestic)—

U. S. Motor (minimum 72 octane):		
New York (Bayonne) *	.08	.085
Philadelphia	.08	.0825
Boston	.085	.09
Baltimore	.08	.0825
Charleston, S. C.	.0725	.0775

*All grades of gasoline ½ to ¼ cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
80 (research)		.0625
72-74 octane (leaded)	.0575	.05875
70-72 octane (unleaded)	.05875	.06
68-70 octane (unleaded)	.05625	.05875

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.03625
Grade 18-55	.0425

NORTH TEXAS—

Grade 26-70	.0325
Grade 18-55	.0375

CALIFORNIA—

75-85 375-390	.045	.05

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70	.0325

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p. 110-flash, 540-550 e.p.	.0375	.03875
41-43 gr., 300-320 i.b.p., 110-125 flash, 500-520 e.p.	.03875	.04
46-48 gr., 210-230 i.b.p. 480 max., e.p.	.04125	.0425

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

42-44	.0450	.0475
41-43	.04375	.04625

NORTH TEXAS—

41-43	.0425	.04625

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.04375	.04625

ARKANSAS (Ark. and N. La. del.)—

41-43	.04375	.04625

PENNSYLVANIA (inland refineries)

46	.06	.0625
45	.06	.06125

CHICAGO (Based on Group 3)—

42-44	.0450	.0475
41-43	.04375	.04625

CALIFORNIA (Pac. Coast market)—

38-40 high-burning test	.045	.055

NEW YORK (Bayonne, N. J.)—

41-43	.055

GULF COAST (domestic)*—

41-43	.035

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.04	.0425
No. 1 white (38-42)	.03875	.04125
No. 1 straw (38-40)	.0350	.03625
No. 2 straw (32-36)	.0350	.03625
No. 3 zero to 10 (28-32)	.03375	.0350

NORTH TEXAS—

No. 1 white (38-42)	.0375	.03825
No. 1 white (38-42)	.03825	.04125

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2 (32-36)	.0325	.03375

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36	.0325	.03375

CHICAGO (Based on Group 3)—

Range oil	.04	.0425
No. 1 white (38-42)	.03825	.04125
No. 2 straw (32-36)	.035	.03625
No. 3 zero to 15 (28-32)	.03375	.035

NEW YORK (Bayonne, N. J.)—

*No. 1		.055
*No. 2	.049	.0525
*No. 3	.049	.0525

*Barge deliveries ⅛ to ¼ cent under above tank-car price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

No. 5, low pour point (18-22)	.95	.90
No. 6, 15 and above (10-16)	.85	.90

NORTH TEXAS—

No. 5, low pour point (18-22)	.80	.85
No. 6, 15 and above (10-16)	.80	.85

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.0325	.035
No. 5, low pour point (18-22)	.85	.90
No. 5, 15 and above (18-22)	.85	.90
No. 6, low pour point (10-16)	.85	.90
No. 6, 15 and above (10-16)	.85	.90

PENNSYLVANIA (inland refineries)—

36-40	.0575	.06

CALIFORNIA—

Los Angeles:		
30-40 gas oil, per bbl.	1.10	1.25
24 plus diesel, per bbl.	1.10	1.25
24 plus diesel (bunkers)	1.20	1.35
12-16 (bunkers at tidewater)	.75	.85
10-16 (cargo lots)	.75	.85
12-17 (tank cars)	.65	.75
10-17 (high sulfur)	.55	.65
San Joaquin Valley:		
10-18 (tank cars)	.70	.85
24 plus diesel, per bbl.	1.10	1.25
San Francisco:		
24 plus diesel, per bbl.	1.35	1.40
24 plus diesel (bunkers)	1.40	1.50
10-16 (bunkers)	.80	.85

GULF COAST—

No. 2 fuel	.0325	.035
43-47 diesel	.035	.03375
48-52 diesel	.03375	.03625
53-57 diesel	.035	.03875
58-and-above diesel	.03625	.0375
Diesel bunkers		1.45
Bunker C (bulk cargoes)	.85	.90
Bunker C (bunkers)		.85

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.050
28-30 diesel (lighterage 6¼c per bbl.)		2.00
28-30 diesel (tank cars)		.05
Bunker C (to ocean-going ships in N. Y. Harbor	$1.35	1.45
Industrial fuel (tank cars)		.044

Lighterage charge 5c bbl. additional

Bright and Steam Refined

OKLAHOMA (Group 3)—

200-210 D, 10-25	.25
150-160 D, 0-10	.21
150-160 D, 10-25	.205
100-110 D, 0-10	.205
100-110 D, 10-25	.20
Steam refined:	
600 dark green (untreated)	.125

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pour point		.295
15 pour point		.285
25 pour point	.25	.27
Steam refined:		
600	.14	.15
650	.135	.16
600 flash	.14	.16
630 flash	.15	.17

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

0-10 pour point:		
150-3		.125
180-3		.13
200-3		.13
250-3		.145
280-3		.155
280-4		.15
300-3		.165
350-3½		.17
400-3½		.185
500-3½		.19
600-3½		.19
100-2½ paraffin oil 10-25		.0725
10-25 pour point:		
200-3		.125
250-3		.14
280-3		.15
280-4		.145

CALIFORNIA (moving to dom. mkt.)—

Pale oils:		
200-2½-3	.0725	.08
300-2½-3	.0725	.08
400-3-4	.0725	.08
450-3-4	.0725	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.0725	.08
300-5-6	.0725	.08
350-5-6	.0925	.115
400-5-6	.0925	.115
450-5-6	.0925	.115
500-5-6	.095	.115
600-5-6½	.0925	.115
700-6½ plus	.0925	.115
750-6½ plus	.0925	.115
900-6½ plus	.0925	.115

GULF COAST—

Pale oils:		
100-3	.0625	0.650
200-3	.0850	.0875
300-3	.09	.0925
500-3½	.0975	.10
750-3½	.10	.1025
1,200-3½	.1025	.10375
2,000-4	.1050	.1075
3,000-4	.1225	.1250

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pour point		.385
10 pour point		.375
15 pour point		.365
25 pour point	.31	.35
200 vis., at 70° F., 3 color:		
Zero pour point		.40
10 pour point		.395
15 pour point		.385
25 pour point	.33	.37

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (A.m.p.) w.c. scale	.05	.0525

PENNSYLVANIA (inland refineries)—

122-124 (A.m.p) w.c. scale	.05	.055
124-126 (A.m.p.) w.c. scale	.05	.0525

NEW YORK—

Wax in bags fully refined:		
125-127 (A.m.p.) wax	.0560	.0640
128-130 (A.m.p.) wax	.0560	.0660
130-132 (A.m.p.) wax		.0585
133-135 (A.m.p.) wax		.0615
135-137 (A.m.p.) wax		.0640
Crude scale:		
124-126 (A.m.p.) w.s.	.05	.0525
124-126 (A.m.p.) y.s.	.05	.0525
Petrolatum in barrels, carload lots:		
Dark green		.02875
Amber	.02875	.03125
Extra amber	.03125	.03375
Lily white	.04875	.05375
Snow white	.05625	.05750
Cream	.04125	.05250

Export Prices

GASOLINE

GULF COAST—

60-62 400	.05125	.065
61-63 390	.05625	.0625
64-66 375	.05625	.0625

LOS ANGELES—

U. S. Motor grades:		
Above 69 octane	.0575	.06
65-69 octane	.055	.0575
60-65 octane	.0475	.0525

KEROSENE

GULF COAST—

41-43 water white	.035	.0375

LOS ANGELES—

41-43 water white	.05	.0525

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbl.)—

Cylinder stocks:		
600 S.R. unfiltered		.23
630 S.R. unfiltered		.235
600 flash, S.R.		.24
650 flash, S.R.		.25
Bright stock:		
Light, 25 pour point	.34	.35

NEUTRAL OIL

200-3 color	.43	.50
150-3 color	.41	.46

PARAFFIN WAX

NEW YORK (prices per bbl.)—

123-125 A.m.p.	.0560	.0625
125-127 A.m.p.	.0560	.0625
128-130 A.m.p.	.0585	.0650
133-135 A.m.p.	.0615	.0700
135-137 A.m.p.	.0640	.0700
Crude scale:		
124-126 w.s.	.05	.0525
124-126 y.s.	.05	.0525

EQUIPMENT PROGRESS...

Cameron Iron Works Given Coveted U. S. Navy Award

Rear Admiral William H. P. Blandy (left), chief of Bureau of Ordnance, Navy Department, congratulates Edmund L. Lorehn (right), vice president of Cameron

Official U. S. Navy Photograph

Iron Works, Inc., Houston, Tex., whose company is one of the 14 manufacturers recently awarded the coveted "Navy E."

In making the "E" awards at a ceremony at Washington, July 25, 1941, Secretary of the Navy Knox said:

"Anyone familiar with the Navy knows what the letter "E" means on the bridge, conning tower, funnel or turret of a naval vessel. It's the highest service award the Navy can make and it means excellence or special merit in gunnery or engineering or some other activity. It's the Navy's way of saying 'well done!'

"In the present defense program, we've asked for miracles of industrial production and what's more, we're getting them. To show our appreciation of the way American industry has gone to bat in this emergency, the Navy has decided to award the Bureau of Ordnance flag and its coveted "E" to the management and men of those plants who are doing an outstanding job in the production of naval ordnance material. Again, it's our way of saying 'well done!'"

TRADE LITERATURE

BRISTOL CO., Waterbury, Conn.—Bulletin 731, describing steel belt lacing for joining or repairing machine and conveyor belts. The publication contains information on typical applications, types and sizes available, as well as prices applying. It is also liberally illustrated, showing how this type of belt lacing is applied.

AMERICAN FLEXIBLE COUPLING CO., Erie, Pa.—Catalog 411, describing and illustrating the complete line of American flexible couplings. Series B and C, two new lines which supplement the popular Series A, are announced for the first time. Each of these three types are described, as well as several others for light and heavy duty, and engineering data given.

LUBER-FINER, INC., 2514 South Grand Street, Los Angeles, Calif.—Sales manual listing its oil filters for trucks, cars, tractors, diesels, marine and stationary engines. The manual, which is highly illustrated, is divided into three main sections dealing with fleet operations, industrial applications and technical reports on oil-filter operations.

Unit Rig & Equipment Co.'s U-10 "Spitfire" being loaded for delivery to Glenn Drilling Co. through Bovaird Supply Co. This particular rig is equipped with three D-13,000 Caterpillar engines compounded; has the exclusive Unit Rig Air-O-Matic clutch; six speeds to either rotary or drum; together with the other unique features characteristic of equipment designed and built by Unit Rig & Equipment Co. of Tulsa.

Otis New Safety Valve Not Affected by Surging Flow

The purpose of the Otis Type C tubing safety valve is to provide a positive and automatic subsurface shut-off the instant damage occurs to the tubing connections regardless if this damage be caused by flow cutting or an outside impact. The principal advantage of this tool over the Type B safety valve is that it is effective in surging wells and will not prematurely close due to the action of heading flows, according to Otis Pressure Control Co., Dallas, Tex.

In principle this tool is merely a valve held in an open position by the compression of an adjustable coiled spring. The valve is actuated by a pressure differential across the valve stem which necessarily must overcome the mechanical load introduced into the spring before the valve will close. Flow through the tool is limited to openings immediately below the valve and seat. A packing element around the valve stem forces all flow through these openings. Consequently, as long as the surface choke is smaller than the combined openings through the safety valve, a negligible pressure drop is created across the valve stem. However, when the size of the surface choke, either because of cutting or outside damage, approaches that of the openings through the safety valve, a pressure drop is set up across the valve stem, causing the valve to suddenly snap closed.

The initial compression placed in the valve spring usually is around 500 lb. per sq. in., however, for wells with comparatively low flowing pressures 100 to 150 lb. per sq. in. may be used. This regulating is done in the field merely by adjusting the nuts on the bottom of the valve stem to the calculated position shown by a calibration chart.

Prior to the origin of this tool, all safety valves were actuated by an increased flow velocity. Consequently, in wells that flowed by surges the velocity type valve sometimes closed prematurely whenever an exceptionally heavy surge occurred. The new type C safety valve is closed only by a pressure differential that is in excess of the mechanical load put in the spring to hold it open. Therefore, it is not affected by fluctuating velocities regardless of the severity of the surging. This is possible because there is actually very little pressure drop created across the valve by a surging flow action.

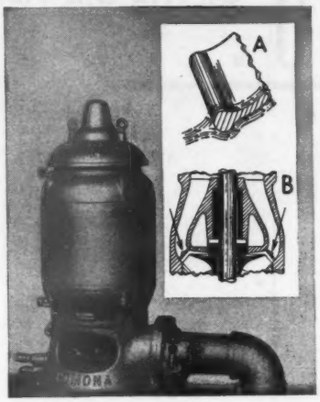
The Type C safety valve is run and pulled under pressure on an ordinary steel measuring line and requires only a few hours to complete the operation.

Pomona Improves Pump Design To Eliminate Hydraulic Losses

The Pomona Pump Co., St. Louis, Mo., and Pomona, Calif., has recently been granted patents covering design improvements which eliminate hydraulic losses in pumps, thereby increasing efficiency as much as 10 per cent. These improvements, now included in all sizes of Pomona vertical turbine pumps, involve fundamental design changes in the guide vanes, function of which is to alter, from horizontal to vertical, the flow direction of fluids being pumped.

Previous practice in pump manufacture dictated that these guide vanes be constructed as thin as possible on the advance edge, on the theory that the less metal the fluid would strike, the less would be

the resistance encountered. However, it was discovered by Pomona engineers that, because fluid being discharged by the impeller element flows across the guide vanes at various angles (instead of always directly across the advance edge), eddy-friction losses are encountered, reducing the efficiency of the pump.



A typical Pomona vertical pump, equipped with new-type guide vanes. (A) Bulbous-shaped end of guide vane, showing even flow of fluid. (B) Cross-section of bowl assembly. Arrows indicate location of guide vanes

By forming these advanced vane ends of a bulbous shape, it was discovered that regardless of the flow direction of the fluid, its direction would aways be substantially tangential to the vane surface. Thus, greater uniformity of flow pattern is secured, friction is reduced and efficiency of fluid lift is increased. Furthermore, because of the recessive curve at the rear of the bulb-shaped vane, eddy currents are not developed as under former circumstances.

Inasmuch as the new guide vanes are an inherent part of the pump bowl assembly, it is not necessary for the owner of a vertical turbine pump to purchase a complete new pump in order to take advantage of the new design. It is only necessary to substitute a new bowl assembly. The manufacturer will be pleased to supply explanatory literature upon request.

Calculator Speeds Computation of Gas-Volume Charts

A new approach to gas calculation has just been perfected through the development of the Martin calculator, which will in one operation mechanically compute volume of gas from an orifice meter chart. Since this machine radically simplifies chart calculation, it promotes greater accuracy together with greater speed.

Operators of this machine need only know how to read a scale and to become adept at keeping machine styli on recorded pressure and differential lines on the chart. The chart turns on an electrically revolved table controlled by a rheostat operated by the foot.

Exhaustive tests of the machine have proven its accuracy as well as its practicability. Its simplicity of construction, there being no fast moving parts, insures a long life for the machine.

The machines will be manufactured only on order, and are being demonstrated in Amarillo, Tex. Address all inquiries to W. F. Martin, Rule Building, Amarillo.

Brown Announces Differential Transmiting System

The Brown Instrument Co., Philadelphia, Pa., announces the development of the differential New-Matic transmitting system. Differences in temperatures, flows, levels, pressures, etc., can now be accurately and conveniently measured by the system. It consists of two measuring elements equipped with pneumatic transmitters, each of which delivers an air pressure proportional to the measured variable, and a differential pressure detector employing a mercury-filled U-tube and a float actuating a recording or indicating pointer.

Where the differences are large, a wide range can be covered. Where the differences are small, minute changes can be easily observed. The two transmitters may be as much as 500 ft. apart, yet indications will only lag 20 seconds for full-scale movement. The actual values of either or both of the measured variables may also be recorded on the chart of the differential pressure detector.

This system is useful for many applications such as controlling and indicating or recording: (1) Difference in inlet and outlet temperature on feed-water heaters, condensers, air preheaters, heat exchangers, etc. (2) Difference in inlet and outlet temperatures of superheater, thus giving the amount of superheat directly. (3) Difference in inlet and outlet temperatures on economizers, thus giving heat recovery directly. (4) Differences in wet and dry-bulb temperatures (combined with the dry-bulb record) thus simplifying humidity calculations. (5) Difference in temperature between the top and bottom of tower or tank. (6) Difference in flows from two reservoirs, boilers, tanks, etc. (7) Difference in levels in two remote tanks.

AMONG EQUIPMENT MEN...

R. M. Otis Joins Lane-Wells To Do Electrical Research

Russell Morley Otis has joined the engineering staff of Lane-Wells Co, according to an announcement made recently by Norman L. Dorn, Lane-Wells, vice president and chief engineer.

Dr. Otis, a graduate of the California Institute of Technology, is a well-known research engineer and physicist. His experience includes research work with the Bell Telephone Laboratories, 3 years as director of research for the Hughes Development Co., research work in color films with Multi-Color, Ltd., research and patent engineering work for the Burt-Warner Power Corp., wing-stress analysis work for the Manta Aircraft Corp., and several years as an independent research counselor and patent attorney.

Dr. Otis will be engaged in electrical research, working on special technical problems.

Ewing Joins Foxboro Staff at Houston, Tex.

George B. Ewing, Jr., has joined the staff of sales engineers attached to the Houston, Tex., office of the Foxboro Co., manufacturers of instruments for process measurement and control.

Mr. Ewing has had wide industrial experience, particularly in the machine and tool-making industries and in petroleum-refining operations. He is a graduate of the University of Arkansas and the engineering course at the University of Alabama.

Eastman Engineer Moved To Rocky Mountain Area

W. J. Williams of the Eastman Oil Well Survey Corp., has been transferred from the Oklahoma City, Okla., division office and appointed chief engineer of the Casper, Wyo., office of the Rocky Mountain division.

This transfer makes available to Rocky Mountain operators the services of one of Eastman's most capable engineers in both oil-well surveying and controlled directional drilling activities.

Pittsburgh Equitable Meter Acquires Larsson Tool Works

W. F. Rockwell, president of the Pittsburgh Equitable Meter Co., announces that his firm has acquired the assets of the Larsson Machine Tool Works of Berkeley, Calif. This acquisition provides the Pittsburgh firm with a modern self-contained tool plant fully equipped to manufacture dies, tools and special equipment. It was stated that the present business would be continued and that these additional facilities would also be utilized for experimental work on a number of new products which are under development.

Snavely Called to Home Office of Chain Belt Co.

Chain Belt Co., of Milwaukee, Wis., has announced that J. Walter Snavely, district manager in the Houston, Tex., territory for 7 years, has returned to the sales department of the conveying and engineering products division at Milwaukee. Mr. Snavely graduated from the University of Wisconsin and entered the employ of Chain Belt Co. as a student apprentice in 1927. The next 3 years he spent in the factory receiving training and experience in the various manufacturing departments.

J. WALTER SNAVELY

W. A. Pitts, formerly representative in Oklahoma City, Okla., has been appointed district manager of oil-well sales at Houston. Mr. Pitts has worked in practically every oil field in the Mid-Continent and Gulf Coast for the past 20 years. From 1926 to 1934 he was in the oil fields in California. He has been the Chain Belt Co. Oklahoma City representative since 1936.

George Hunt has been appointed district manager of industrial sales with headquarters at Dallas, Tex. Previous to his joining the Chain Belt organization, Mr. Hunt was an engineer for one of the largest paper mills in the South.

BUSINESS NOTES

To meet the demands for executive direction imposed by a growing participation in the defense program, Worthington Pump & Machinery Corp. has appointed Carleton Reynell as general manager of purchases and traffic, Frederic W. Thomas as assistant general manager of purchases, and Dean K. Chadbourne as assistant general manager of traffic.

Industrial Products Co. has announced the removal of its offices from 800 West Somerset St. to larger quarters at 2820 North Fourth Street, Philadelphia, Pa.

CLASSIFIED ADVERTISING

THE MARKET PLACE OF THE OIL INDUSTRY

Patent Attorneys

PATENTS — TRADE MARKS

All cases submitted given personal attention.

Form "Evidence of Conception" with instructions for use and "Schedule of Government and Attorney's Fees"—FREE.

LANCASTER, ALLWINE & ROMMEL
Patent Law Offices
618 Bowen Bldg., Washington, D. C.

Leases and Drilling Blocks

LEASES ROYALTIES
PRODUCING OR NONPRODUCING
Texas, New Mexico, Oklahoma, Louisiana and Illinois
20 Years Experience
Inquiries Invited

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

Leases and Drilling Blocks

LEASES—East Texas, La., South Ark. 20 acres up, dollar acre up.—Owners—Address Attorney, Box 1122, Little Rock, Ark.

FOUR THOUSAND ACRE (4000) BLOCK
Rapides Parish, Louisiana
Open for Quick Deal
Box A-584, The Oil and Gas Journal
Tulsa, Okla.

OIL LANDS

For mineral lease or leases, approximately 35,000 acres, divided into blocks of less than 5,000 acres each, extending South from Sec. 14, Township 21 South, Range 22 East, to the Gulf of Mexico, and East of Cammada Bay, situated in the Parish of Lafourche or Jefferson, State of Louisiana.

Specifications including detailed descriptions of lands may be obtained from the undersigned.

Sealed bids will be received at the office of the Mayor of New Orleans, Lousiana, on or before the 26th day of August, 1941.

EDWARD WISNER DONATION ADVISORY COMMITTEE
FRED W. MATTHEWS, Secretary-Treasurer
c/o CHARITY HOSPITAL, New Orleans, La.

EAST TEXAS Woodbine—Trinity sand wildcats starting on Major Company blocks offer quick play 10 to 50 for one bets. E. CROFT, PROCTOR, TEXAS.

FOR SALE: Oil and gas leases and small production located in Kentucky shallow field, also tracts of proven Fluorspar and zinc deposits. Reports on request. W. P. HARLEY, Bowling Green, Kentucky.

U. S. OIL RESERVE lands can be filed for lease on limited acreage by American Citizens. Want several join me in filing block in developing Rocky Mountain Area. Big opportunity. Small expense. Box A-346, The Oil and Gas Journal, Tulsa, Okla.

CASH paid for producing gas or oil wells anywhere. Old wells considered. G. Gibbs, 7700 Geary, San Francisco, Calif.

WILL SELL five acres undivided mineral rights perpetual under SE 29-8N-2E, Pottawatomie Co., Okla. $20.00 per acre, leased $1.00 per acre rentals. Certificate of title furnished. Write Box 483, Shawnee, Okla.

FOR SALE OR LEASE
200 ACRES
ZINC, LEAD, SILICATE LAND
Opportunity for operators that can finance a mining deal. General description furnished on request.
C. C. McCORMICK, Aurora, Mo.

FOR SALE: 160 acres surrounded by production. Major Co. operating lease joining. 750 ft. to sand. Will drill and equip well, assign lease for $2,500.00. Also excellent leases for Repressuring. H. B. Snyder, Box 126, Ottawa, Kans.

OWN more than 600 acres in the hot spot of Gray Co., Texas. Will sell some lease and royalty. E. B. Reeves, Alanreed, Texas.

FOR SALE—80 acres, in Section 32, 17 South, 32 East. Very close to activities in Maljamar Pool. Box A-610, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—Eastern Kansas—Two (2) Producing oil wells, equipment and Lease 100 acres. Depth less than 1,000 ft. Territory adapted to artificial water drive. Reply to Box A-611, The Oil and Gas Journal, Tulsa, Okla.

OIL AND GAS leases, 40, 80, 160-acre tracts in big oil play near McLouth field, NE Kans. 20 large gas and 7 oil wells, 16 drilling. Merit Royalties, R. # 3, Box 339, N. Topeka, Kans.

NEW MEXICO
State Oil and Gas Leases
BUY leases on structures where major companies buy. One dollar per acre. 5c rentals, Ten-year term. Write today. Place a little bet on New Mexico.
HARRY S. WRIGHT
Farmington New Mexico

IF YOU are int. in big prod. and have equip. you may drill my 4240 ft. well in cent. Loving Co. Texas pool deeper. Geologist says present 40 gr. oil comes from deeper strata, which recent test showed to be at 4800, 5400, 6200 ft. This is now being done in Ward Co. where 8000 bl. are drilled on same general struc. Will give 600 acres. Investigate. H. Freels, 251 S. Hill, Los Angeles, Cal.

NEW MEXICO
Oil and Gas Leases and Royalties.
ROY G. BARTON, Hobbs, N. M.

Leases and Drilling Blocks

TO LEASE—14,000 A. Louisiana Oil Land prov. on 2 sides, ⅛ roy. Action invited. H. Freels, 251 S. Hill St., Los Angeles, Calif.

FOR SALE

All properties and assets of Kessler Oil and Gas Company consisting of producing leases and lease interests and equipment and producing and non-producing royalties in Oklahoma, Kansas and Texas. For information write the company at 604 Petroleum Building, Oklahoma City, Oklahoma. (No employment of brokers authorized.)

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CAPITAL SEEKERS
Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD, Fox Theater Building, Detroit, Michigan.

Ranches—Farm Lands

LOUISIANA FARM
For Sale. Six adjacent counties producing oil. Prospecting now active. 1026 acres of land, fertile fields and timber (Hard woods). Bisected by paved state highway, one mile from railroad station, 150 miles from New Orleans. Reason for wanting to sell is illness. For complete information address A. V. Boutte, Jr., 2536 South Galvez St., New Orleans, La.

For Sale—Maps

MY PERSONAL MAP, just completed, of area of new "Wilcox sand trend," Caddo, Grady, Stephens and Comanche Counties, southwest Oklahoma, now available. Shows wells, dry holes, known locations, depths of deepest wells, and corrected culture. Prices: Paper $7.50, Linen $10.00, from Map Department, Frederick G. Clapp, Consulting Geologist, 124 Chickasha Ave., Chickasha, Okla.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

Addresses Wanted

REWARD for information as to whereabouts of RAY L. MARTIN, lease man. Wire or call Geo. F. Turner, 615 S. Denver, Tulsa, Okla., Phone 2-5959.

Royalties

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma

MAPS, information, valuations, well reports, etc., on royalties and producing properties, Texas and New Mexico. ROYALTY OWNERS SERVICE, P. O. Box 1535, Fort Worth, Texas.

WE BUY & SELL all types of Oil and Gas Royalties. Sales restricted to registered dealers only. Grimes Royalty Co., Tulsa Loan Bldg., Tulsa, Okla.

MONTHLY asphalt royalty income and a rock asphalt deposit for sale. Write owner, Lewis Smyth, Uvalde, Texas.

Situations Wanted

PETROLEUM ENGINEER and Geologist, 11 years experience as general superintendent for independent operator, desires connection with reliable company. Box A-600, Oil and Gas Journal, Tulsa, Okla.

SALESMAN, petroleum engineer, measurement engineer; 36 years old, married; currently and for past 6½ years engaged heavy and technical equipment sales all phases petroleum industry; desire new connection. Would also consider foreign assignment. Reply Box A-613, The Oil and Gas Journal, Tulsa, Okla.

Help Wanted

AMERICAN BOOKKEEPER wanted for Independent part time book work and small warehouse; must be familiar with production equipment. Man with some practical production experience preferred. Opportunity to become manager. Living quarters on property. Give complete experience record and salary expected. P. O. Box 99, Great Falls, Montana.

"DRILLING MUD"
Distributors and dealers wanted for light and heavy mud, low price per ton, big profit, small investment, get territory now. Box A-601, Oil and Gas Journal, Tulsa, Oklahoma.

Business Opportunity

PAVING ASPHALT WANTED

We have a market in Indiana and surrounding states for asphalts and road oils. What have you?

THE HIGHWAY COMPANY,
Zionsville, Indiana.

Mailing Lists

ROYALTY owners, Oil investors, Unit holders, Stockholders, Operating personnel of oil industry. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa, Okla.

Legal Blanks

BURKHART'S legal blanks and general forms serving Mid-Cont. oil field since 1908—Okla. Kans. N. Mex. Tex. Ala. Ark. Fla. Ga. Ill. Ind. Ky. La. Mich. Miss. Mo. Neb. N. Dak. Tenn. Wyo. Free catalog samples on request. Burkhart Ptg. & Sta. Co., 115 S. Cinn., Tulsa, Oklahoma.

For Sale—Equipment

2—#45 Star S.T. Spudders or will trade for production. Bert Miller, Phone 623, Salem, Illinois.

FOR SALE—Emsco UBLS 54 unit, new, cut tooth sprocket chains, double drive sprocket, A-1 shape, located Beaumont, Texas. Write F. H. Brown, Shreveport, La.

FOR SALE — Griscom-Russell Sections:
13-R-240 3 pass 125# 186 sq. ft.
15-R-240 3 pass 1,000# 186 sq. ft.
3-C-240 4 pass 125# 524 sq. ft.
7-A-240 3 pass 125# 296 sq. ft.
C. J. Smith, 532 Beacon Bldg., Tulsa, Okla., Phone 5-3416.

ALL STEEL 81 Keystone with all drilling in and tubing and rod tools, light plant and doghouse. Also, Fort Worth Super J Spudder with all big hole tools 15½" to 5", 165 H.P. Climax motor, 10" shear poles, light plant and doghouse. Everything A-1. Craig Drilling Co., Box 697, Grayville, Ill.

CLASSIFIED ADVERTISING RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times
3 Lines	$1.05	$1.80	$2.55	$3.30
4 Lines	1.40	2.40	3.40	4.40
5 Lines	1.75	3.00	4.25	5.50
6 Lines	2.10	3.60	5.10	6.60
7 Lines	$2.45	$4.20	$5.95	$7.70
8 Lines	2.80	4.80	6.80	8.80
9 Lines	3.15	5.40	7.65	9.90
10 Lines	3.50	6.00	8.50	11.00

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	1 time	$5.00
1 Inch	13 times	4.50 per inch
1 Inch	26 times	4.00 per inch
1 Inch	52 times	3.50 per inch

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma